Full Scope
Concept Development Report

Route I-280 WB over 2nd Street on-ramp, 1st Street, Orange Street, Morris & Essex Lines and Newark City Subway Tracks

City of Newark, Essex County

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New Jersey Department of Transportation
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I. INTRODUCTION

A. Foreword

Project UPC #123180

This report documents the results of the Concept Development (CD) Phase for the rehabilitation/replacement of the Route I-280 WB over 2nd Street on-ramp, 1st Street, Orange Street, Morris & Essex Lines and Newark City Subway Tracks (Structure No. 0730-192).

The bridge carries Route I-280 WB over 2nd Street on-ramp, 1st Street, Orange Street, Morris & Essex Lines and Newark City Subway Tracks and is located between MP 13.29 and MP 13.54. This bridge is located in the City of Newark, Essex County, New Jersey (see Appendix C for Location Map and Straight Line Diagram).

Route I-280 is classified as an Urban Interstate. The posted speed of the segment of Route I-280 within the limits of this project is 50 mph. The divided highway generally runs in the east-west direction. Route I-280 connects the New Jersey Turnpike and City of Newark to Parsippany and the northwestern portion of New Jersey, through Route I-80.

The bridge is located in an urban area. The structure is a ten (10) span, simply supported, composite, welded steel plate multiple girder bridge, with two (2) fracture critical member (FCM) welded steel box girder caps at two (2) piers.

The existing conditions of the bridge and roadway are described within this report. The problem statement, as well as the project purpose and need, are also evaluated and discussed.

B. Original and Successor Projects

The bridge was constructed in 1972 by the New Jersey State Highway Department – Divisions of Bridges (Section 7D). Miscellaneous structural repairs and retrofitting of the parapet to accommodate additional lighting were completed circa 1990 (Sections 1H, 2J, 3N, 4P, 5V, 6W, 7AC & 8J). Ramp improvements at 1st Street were completed in 1998 (Section 7AA). Most recently in 2010, slab stabilization, pavement repair and deck waterproofing was completed (Contract No. 006053070). For detailed as-built plans, refer to Appendix D.

C. Data Reviewed

During the data collection phase of this project, specific sources were consulted to obtain information pertaining to the existing conditions of the study area. This information was evaluated to determine substandard elements or noncompliance with current design standards. These sources form the base data used during the development of improvement alternatives.

- 2012 Tier II Screening Report (URS)
- 2012 Bridge Re-evaluation Report, 17nd Cycle (NJDOT) (Appendix B)
- 1972, 1990, 1998, 2010 Original and Successor Project Construction As-built Plans (NJDOT) (Appendix D)
- 2012 Environmental Screening Report (NJDOT) (Appendix I)
- Jurisdictional Limit Maps and Right-of-Way Plans (NJDOT) (Appendix D)
- Crash Records (NJDOT) (Appendix K)

- Traffic Counts (NJDOT) (Appendix L)

D. Design Standards

The following design standards were used in the development of the project alternatives.

AASHTO

- A Policy on Geometric Design of Highways and Streets, AASHTO, 2011
- Standard Specifications for Highway Bridges, 17th Edition
- LRFD Bridge Design Specifications, 6th Edition

New Jersey Department of Transportation

- Design Manual – Roadway
- Design Manual – Bridges & Structures
- Specifications for Road and Bridge Construction
- Construction Cost Estimating Guide & Average Bid Price Report (2013)

E. Characteristics of the Roadway and Surrounding Area

Route I-280 Westbound is a two (2) lane divided highway, separated entirely from the Eastbound structure. The existing roadway cross section within the project limits consists of two (2) 12' travel lanes, one (1) 13' & variable width auxiliary lane with a 1' outer right shoulder, and a 3.75' inner left shoulder. A 1.5' wide safetywalk is located along the outer parapet. Lighting standards run the entire length of the structure, mounted to the outer parapet. The posted speed limit is 50 mph. Two (2) overhead sign structures were mounted to the outer parapet but have been removed in recent years.

Appendix E includes aerial and site photographs of the structure and surrounding area.

The topography of the area varies greatly due to the presence of residential, parkland, wetland, railroad, commercial, and other state highway Right-of-Way (ROW) in close proximity to the structure. This section of Route I-280 is located over the following major topographic features (see Appendix D for Jurisdictional Limit Maps):

- City of Newark
    - Orange Street
    - 1st Street
- New Jersey Transit
    - Morris & Essex (Gladstone) Commuter Rail Line
    - Newark Light Rail Line
- NJDOT
    - Route I-280, Ramp "A"

The Average Annual Daily Traffic (AADT) calculated by the NJDOT Bureau of Transportation Data Development (BTDD) at MP 12.65 within the project limits is 45,997 vehicles/day. This data is based on a traffic count conducted between 10/03/11 – 10/05/11.

To view socioeconomic data pertaining to the City of Newark, an abbreviated US Census Report has been provided in Appendix M.

F. Concept Development Scope Statement

In order to complete the Route I-280 WB over 2nd Street on-ramp, 1st Street, Orange Street, Morris & Essex Lines and Newark City Subway Tracks Concept Development project phase in accordance with the NJDOT CD Project Delivery Process, activities associated with the Alternatives Analysis, selection of the Preliminary Preferred Alternative, and preparation of the Concept Development Report were performed.

G. CD Public Involvement Action Plan

Public participation is a crucial element in the successful completion of this proposed transportation project. A comprehensive and pro-active Public Involvement Action Plan (PIAP) is fundamental to organizing and promoting public participation. The PIAP is designed to promote an on-going partnership to ensure the impacted communities are considered, informed and involved in the project's process and benefits. The public outreach process shall assist in the development of public understanding of the problem definition and will provide an outlet for public involvement to finalize selection of a preferred alternative. The implementation of the PIAP is a dynamic process, and will be updated throughout the life of the project. The following is a summary of the CD PIAP conducted for this project (see Appendix T for full report).

1. Public Involvement Goals

- Inform and educate the community of the project and gain agreement on the problem definition.
- Provide effective education to the public regarding the funding, permitting, design and construction process.
- Clearly communicate the public's role in this process.
- Provide this information in a clear, concise manner while encouraging feedback.
- Provide a convenient and effective mechanism for the public to offer input in the development of the project.
- Obtain public input on issues and potential opportunities.
- Build public support for the preferred alternative through early public involvement and the early selection of a preferred alternative.
- Consider public interest in the implementation of the preferred alternative to ensure that the final design incorporates and addresses public concerns.

2. PIAP Implementation, Strategies and Techniques

The comprehensive PIAP is an outreach program intended to provide information to the public, and then provide a forum for all stakeholders to offer feedback. The PIAP is dynamic and will evolve with each stage of the project. Using a variety of techniques, implementation of the program will involve early, frequent, and continuous consultation with the public. A flexible and adaptable process assisted in identifying issues either early in the process or before they arise. The Office of Community Relations (OCR) was informed and had final approval to ensure the PIAP fulfilled these CD goals.

3. Stakeholder / Mailing List

Key stakeholders were identified and a mailing list was developed and updated throughout the duration of the study. The list contained a database of names and addresses comprised of county and local officials. The list was periodically reviewed and updated. This list was used to send project related information in order to foster an informed and involved community. Letters of notification were sent to the Mayor, City of Newark and the Essex County Engineer (Appendix P).

4. Public and Officials Meetings

The NJDOT and Essex County are committed to establishing and maintaining effective dialog with local officials. During the Tier II Screening Phase, a community outreach meeting with city officials was held on July 17, 2012 at the City of Newark Engineering Department, during which information was distributed regarding the project problem statement, purpose and need for action, and the preliminary alternatives being considered. Information gathered and issues cited during these meetings related to local knowledge of the project area. Local knowledge included municipal policies and issues, bridge and highway standards, business and economic issues, zoning and land use initiatives (including redevelopment plans) and emergency services information. Input from these officials was solicited and considered by the study team. During the CD Phase, an additional meeting was held on February 11, 2014 at the City of Newark Office of Traffic Signals, in order to discuss the alternatives and gain support for the Preliminary Preferred Alternative (PPA).

Meeting agendas typically included the project schedule, goals of the study, and the role of the stakeholders in the overall design and construction process. This format allowed attendees to understand the scope of the problem, the issues regarding preferred alternatives, and provide feedback. After adjourning, minutes were prepared and distributed to the attendees for comment. Meeting minutes can be found in Appendix P.

5. Public Information Center

Public meetings are an effective process in which to engage the public in a meaningful exchange of information, views and concerns. On May 28, 2014, a Public Information Center (PIC) was held for the public. The meeting included displays of information via display boards, and an informal Q & A and comment period. For the PIM a summary was prepared to identify and document the concerns raised by the community and/or stakeholders. These concerns will be taken into consideration during the project development process. The attendance sheet and notes from this PIC are located in Appendix P.

6. Project Brochures, Presentation, Fact Sheets and FAQ's

Project Brochures, Flyers, Fact Sheets and FAQ's were prepared and distributed at local official meetings. These materials will be available on the project website.

7. Public Display Boards

Display Boards can be an effective approach to deliver concise project information to the public. A display board was prepared for viewing at local official meetings. The graphic included an aerial map and diagram of the preferred alternative. See Appendix P for project Information Sheet, PIC and Display Board graphic.

8. Issues Log

The project team shall document all public comments and maintain a chronological record of all public comments or questions. The issues log shall also describe how the project team responds and resolves the issues. This information is a valuable source of information in identifying common public concerns.

II. PURPOSE AND NEED

A. Purpose

The purpose of the proposed project is to correct structural deficiencies, substandard elements, improve the safety of the traveling public, and eliminate the bridge's structurally deficient condition.

B. Bridge Needs

A field inspection of the bridge and re-evaluation of its condition was performed by Buchart-Horn, Inc. in August, 2012 (17th Cycle). The overall condition of the structure was classified as "fair", primarily due to substructure condition. The deck was listed in "poor" condition, due to approximately 40% contaminated deck concrete — increased from 30%, as noted in the 10th Cycle re-evaluation circa 2000.

The structure is "fracture critical" due to the non-redundant welded steel box girder pier caps at piers 6 and 7. Based on in-depth technical analysis by Abington Associated, Inc. in February, 2006, the fracture critical welded steel box girder pier caps are in "fair" condition due to minor section loss, up to 1/8", in the top plate negative moment region.

The structure is classified as "structurally deficient" due to the poor condition of the deck. Therefore, the following remedial action was proposed in the 17th Cycle report:

- Remove the existing bituminous concrete wearing surface;
- Scarify the concrete deck;
- Repair the concrete deck in its entirety;
- Overlay with Latex Modified Concrete (LMC); and
- Replace approach slab (Typ.).

C. Scour Needs

The structure is not scour critical. However, the east abutment slope protection exhibits up to 3" of undermining, with erosion. The northeast wingwall footing (approx. 40' from the end of the east abutment) has become partially exposed. These issues present potential for scour critical conditions in the future, and should be addressed in the Preliminary Engineering phase.

D. Maintenance Needs

There is no record of maintenance concerns for this corridor. The NJDOT Maintenance Management Unit did not provide input. However, the 17th Cycle report noted multiple fully clogged drainage scuppers. These substandard basins presented minor flooding during rainfall events as recently as 2011, and are further discussed in the Tier II Screening report.

E. Roadway Needs

Based on the as-built plans provided by the NJDOT and the 2012 Design Exception Manual, the project limits exhibit the following geometric and roadway Controlling Substandard Design Elements (CSDE):

(See next page.)

No.	Controlling Substandard Design Elements	Location	Existing Value	Standard Value
1.	Horizontal SSD	Sta. 648+58 to Sta. 650+86	303’	495’
2.	Horizontal SSD	Sta. 655+74 to Sta. 657+85	291’	305’
3.	Sag Vertical SSD	Sta. 639+85 to Sta. 643+80	340’	495’
4.	Crest Vertical SSD	Sta. 647+25 to Sta. 656+75	448’	495’
5.	Sag Vertical SSD	Sta. 666+95 to Sta. 671+15	377’	495’
6.	Superelevation Rate	Sta. 640+50 to Sta. 642+50	5.0%	5.4%
7.	Superelevation Rate	Sta. 648+50 to Sta. 649+75	5.5%	5.9%
8.	Superelevation Rate	Sta. 656+00 to Sta. 657+50	5.5%	5.9%
9.	Superelevation Rate	Sta. 664+78 to Sta. 668+60	1.8%	2.8%
10.	Maximum Grade	Sta. 655+75 to Sta. 658+60	5.5%	5%
11.	Outer Shoulder Width	Project Limits	1’	10’
12.	Inner Shoulder Width	Project Limits	3.75’	4’
13.	Min. Vertical Clearance*	6th Street over I-280	14.83’	16.5’

**Min. Vertical Clearances refer to NJDOT Design Manual for Bridges and Structures - 5th Edition (Table 3.3.2)*

A slope of 5.5% is at the eastern end of the bridge and is above maximum allowable grades (5%) for interstate highways (see Table 4-8 of the AASHTO - A Policy of Design Standards - Interstate System Manual). A 1% increase in the standard value is applied for urban areas.

The NJDOT Pavement Management & Technology Unit stated there are no roadway pavement needs at this time.

F. Goals and Objectives

A set of project goals and objectives has been developed, based on the project’s Purpose and Need statement, findings from previous reports, design manuals, and information obtained during stakeholder and NJDOT meetings. While the project may not be able to satisfy all goals and objectives listed herein, it seeks to address as many as practicable. The goals and objectives of this CD report are as follows:

- Use available background material provided by the NJDOT to finalize bridge rehabilitation alternative;
- Avoid, minimize, or mitigate environmental impacts to cultural resources, Section 4(f) properties, wetlands, and parklands;
- Minimize impacts to traffic during construction staging; and
- Where feasible, implement cost effective geometric roadway and traffic safety improvements, as related to crash rates and congested traffic conditions.

III. EXISTING INVENTORY AND CONDITION

A. Existing Roadway Inventory and Condition

The existing Route I-280 WB over 2nd Street on-ramp, 1st Street, Orange Street, Morris & Essex Lines and Newark City Subway Tracks is a ten (10) span, simply supported, composite, welded steel plate multiple girder bridge, with two (2) fracture critical member (FCM) welded steel box girder caps at two (2) piers. The piers and abutments are supported on concrete spread footings. The original bridge was built in 1972 and underwent parapet modifications circa 1990. The existing bridge has overall length of 1,052' and an out-to-out width of 45', carrying two (2) travel lanes, one (1) auxiliary lane, narrow shoulders, an inner barrier curb and outer safetywalk and parapet.

The bridge is in fair condition, exhibiting a contaminated deck, minor section loss and pitting in the substructure steel box girder (fracture critical). Moderate edge spalling of the concrete headers, loose compression deck joint seals, clogged drainage scuppers, exposed electoral wiring on the parapet, missing bearing anchor bolts, various contracted rocker bearings, incipient spalling of the breastwall, slight undermining of concrete slope protection, and minor scouring of the northeast wingwall.

The NJDOT Bridge Management Unit provided a structural ranking of Priority 3. (The ranking system process provides scores for structures.) The bridge was determined to be structurally deficient in the last Bridge Re-evaluation 17th Cycle Report, due to poor deck conditions.

The roadway posted speed is 50 mph, with a design speed of 55 mph. No utilities are supported by the structure. Lighting is mounted on the outer parapet. The bridge carries Route I-280 WB over five (5) train tracks, two (2) local roads, and one (1) interstate highway ramp.

1. Highway Classification

The functional classification of Route I-280 is an Urban Interstate, as published in the NJDOT Straight Line Diagram (Appendix C).

2. Project Category

National Highway System

According to the NJDOT Straight Line Diagram, Route I-280 is part of the national Strategic Highway Network (STRAHNET) Interstate, important to the US strategic defense policy. STRAHNET Interstate highways provide defense access, continuity, and emergency capabilities for the movement of personnel, materials, and equipment.

NJDOT Construction Cost Estimating Guide

This project is classified as a "Reconstruction Project", according to the NJDOT Construction Cost Estimating Guide.

3. Management Systems Summary

Route I-280 is considered "very congested", ranked 4th on the list of Bottlenecks on State Highways. The structure was given a classification of Structurally Deficient (SD). Flooding and ramp icing have occurred over the last 5 years. Detailed inputs and ratings from the various NJDOT management systems can be found in the following table:

(See next page.)

Management System Unit	Input and Rating
Structural Engineering Bridge Management System (BMS)	Structure was given a weighted score of 336, earning a priority ranking of 3/5, with a score of 1 being the highest priority and 5 the lowest. Bridge was given a classification of Structurally Deficient (SD). From a SCIS perspective, problem statements with a SD classification and a Priority 1 or Priority 2 rating based on the BMS are generally recommended to Tier II Screening. Given the weighted score, this structure is closer to a Priority 2 than Priority 3 rating. The sufficiency rating for this structure (Structure No. 2012-150) is HS46.0 (Inventory) and HS75.9 (Operating).
Systems Development and Analysis Congestion Management System (CMS)	Congestion Management System (CMS) score of 7.60, a High Priority area that is very congested. The area is ranked 4th on the list of Bottlenecks on State Highways and ranked in the top 11th percentile system-wide. This location is on the list of Congested Commuter Corridors on State Highways.
Drainage Management System (DMS)	MP 13.0 to 14.0 ranks 8th in the DMS Ranking List. Icing on and around the 1st Street ramp was also reported 3 times in the last 5 years.
Operations Support Maintenance Management System (MMS)	Inlets and manholes were cleaned in January, 2008 at MP 13.6, east of the bridge. Inlets and manholes west of the bridge were repaired in April, 2009.
Smart Growth Management System (SGMS)	Smart Growth Area score is high (perfect scores in Smart Growth Area, Bus Stops, Rail Stations, and Pedestrian Compatibility Index). The Economic-Social Equity Score totaled 72/100. Improvements in this area would probably have positive benefits towards providing smart growth enhancements.
Pavement Management & Technology Unit	MP 6.2-14.2 was resurfaced in 2010, [Contract No. 006053070]. There is no pavement resurfacing need in this area, at present
Traffic Engineering and Safety Program	No input provided.
Geotechnical Engineering - Rockfall Hazard Rating System, Underground Strata	No input provided.

4. Roadway Cross Section Elements

Cross sectional data for Route I-280 WB was developed through a review of the as-built plans, as well as the 17th Cycle bridge re-evaluation report and field observations.

The existing data and the minimum and desirable widths for Urban Interstate highways, as specified in the NJDOT Roadway Design Manual, are shown below:

Roadway Element	Existing Value	Minimum Value	Desirable Value	Sub-standard
Through Lane (2)	12’	11’	12’	No
Auxiliary Lane (1)	13’ & Varies	10’	12’	No
Inside Shldr. (1)	3.75’	4’	5’	Yes
Outside Shldr. (1)	1’ & Varies	10’	12’	Yes

5. Right-of-Way

The existing Right-of-Way (ROW) is generally 14’ from the fascia line of the bridge in the area east of 1st Street and is 10’ from the fascia line of the bridge in the area west of 1st Street. The ROW width varies near the ramps at both ends of the bridge.

6. Horizontal Alignment

The bridge is comprised of a complex S-curve with multiple compound curves. For detailed curve data, please refer to as-built plans (Section 7D – Sheet 11 “Alignment”). The bridge is approximately 1,052’ in length. See Appendix D for detailed as-built plans.

7. Vertical Alignment

The vertical alignment within the subject bridge consists of a 950’ long crest vertical curve (K=12.119) at -5.5% grade, with substandard stopping sight distance (see Section III.A.8 of this report) acceptable for a 55 mph design speed. The east end of the bridge meets a tangent grade of +4.705% near the approach. The west end of the bridge meets a tangent grade of 5.5%.

8. Sight Distance

The vertical stopping sight distance (SSD) provided by the crest vertical curve on the bridge is 448’, which is substandard in related to the 495’ standard SSD, as specified by the NJDOT Roadway Design Manual for a 55 mph design speed.

9. Existing Pavement

A visual inspection and review of the as-built drawings indicate asphalt pavement on both highway approaches, and waterproof asphalt surface course overlay on the bridge.

In 2008, the project limits were milled 2” and resurfaced with bridge deck waterproof surface course asphalt pavement. A large pothole near the west abutment was patched with rubberized material, as shown in the 17th Cycle report. All other pavement data can be found in the Typical Sections, Sheet 16 of Contract No. 006053070 (Appendix D).

According to the NJDOT Pavement Management & Technology Unit, “MP 6.2 -14.2 was resurfaced in 2010, [Contract No. 006053070]. There is no pavement resurfacing need in this area, at present.”

10. Curb, Sidewalk, Barrier, and Guiderail

A 1.5' wide safetywalk is located along the outer parapet. In addition, a railroad barrier wall exists, transverse over NJ Transit light rail tracks. The existing outer parapet had been reconstructed to provide overall additional height. A 2.25' barrier curb is located along the inner fascia — no sidewalk or safetywalk is present. Existing guiderail is present at the west abutment of the bridge, and appear to be outdated.

11. Highway Lighting and Sign Structures

Existing lighting is present, mounted along the outer parapet. Two (2) overhead sign structures were mounted to the outer parapet, but have been removed in recent years.

12. Impending Land Use

The study area falls within the jurisdiction of NJ Transit, the City of Newark, or the State of New Jersey. No major development plans have been proposed within the project limits during the duration of construction. To view mapping of land use in the surrounding area, refer to the Environmental Constraint Map in Appendix I.

13. Posted and Design Speeds

The posted speed limit for Route I-280 WB within project limits is 50 mph. The design speed for the project is 55 mph; 5 mph over the posted speed limit.

14. Storm Drainage System

Based on the as-built plans and field observations, the subject bridge carries existing drainage structures including scuppers and drainage pipes.

Since a roadway high point is located near the middle of the subject bridge, two (2) regions are designated for drainage purpose:

- West Area – The existing roadway low point at the 6th Street crossing near Sta. 640+25; and
- East Area – The area near Clifton Avenue and Nesbitt Street.

A spread calculation was performed for these areas to determine if the flooding was due to inadequate spread width on the roadway. See Appendix J for Drainage Data.

Seven (7) existing inlets on both sides of Route I-280 westbound roadway in the West Area were analyzed. The results show that the spread widths at these inlets are less than the maximum allowable spread width specified in Section 10.5.5 of the NJDOT Roadway Design Manual.

In the East Area, most of the inlets east of Sta. 666+50 have spread widths exceeding the maximum allowable values. The observed reasons are as follows:

- Lack of shoulder – Route 287 WB roadway has 1' shoulder on both left and right side east of Sta. 666+75;
- Inadequate cross slope – The cross slope of the roadway is 1.23% east of Sta. 668+50 and it is substandard; and
- Lack of inlets – The existing inlet at Sta. 666+10, Left has a drainage area just under 18,000 SF, 0.41 Ac, all pavement. The inlet cannot intercept all of the water from such a large drainage area. In addition, the typical inlet spacing in this area is about 300' and is inadequate considering the flat cross slopes, longitudinal slopes and lack of shoulder.

15. Mapping

Digital orthophotography was used during the Tier II Screening phase to evaluate the study area. Aerial photography was captured in March and April, 2012. These image datasets are referenced to New Jersey State Plane Coordinate System (Transverse Mercator), North American Datum NAD83 (NSRS 2007) adjustment. Units in US survey feet.

A Primary Project Control Survey of the study area — including photogammetry control — was performed by Amercom Corp. in May, 2013 (Appendix E). The objective was to establish primary and photogrammetry survey control for Aerial Mapping (by GEOD, Corp.) for Route I-280 WB over 2nd Street on-ramp, 1st Street, Orange Street, Morris & Essex Lines and Newark City Subway Tracks, in the City of Newark.

The results of this survey were issued are in accordance with NJDOT Article 44 requirement for Horizontal Control Second Order, Class II and Vertical Control, Second Order Class I Accuracy Standards.

The final base mapping coordinates are based on the New Jersey State Plane expressed in ground coordinate system of NAD 83 (adjusted 2007) and elevations are in NAVD88 US survey feet.

The survey limits extend 500' east of Nesbitt Street to 500' west of 6th Street on Route I-280 WB. The survey bandwidth extends 10' beyond the curb.

Mapping specific to Land Use and Wetland Delineation can be found in the Environmental Screening report (Appendix I).

16. Railroads

New Jersey Transit's Morris & Essex Commuter Rail and Newark Light Rail have ROW within the project limits. A total of five (5) rail lines cross under the Route I-280 WB within the project limits. These alignments are cited in the NJDOT SI&A reports, and have been confirmed by field survey. Critical issues include the following:

- No cranes or large equipment are permitted under spans over railroad tracks. Cranes are permitted only during outages, typically between 2:15 AM – 4:20 AM. NJ Transit allows installation of shielding only between outages; and
- Demolition is allowed only after shielding installation is completed and the bridge is grounded. Barrier height above railway shall be 6'-6" height minimum.

These restrictions are severe and will affect the overall construction duration significantly. If large equipment restriction cannot be waived, precast concrete panel construction will not be feasible, due to the need for a gantry crane system. The cast-in-place method would become the only feasible method of construction.

Associated utility letter and meeting correspondence can be found in Appendix O.

17. Utilities

Information derived from as-built plans, site inspections, and Utility Letter No. 1 (see Appendix O) confirms the following utility and railroad facilities within project limits:

- Electric – Public Service Electric & Gas Company
- Telephone – Verizon New Jersey, Inc.
- Water – City of Newark, Water Department

- Sewer – City of Newark, Water Department
- Railroad – New Jersey Transit

The structure carries one (1), 2" or 3" rigid metallic conduit in the existing safetywalk for the existing lighting. There are no other utilities on this structure. Existing ITS equipment is present near the off-ramp to 6th Street.

A detailed investigation of utilities on-site has not yet been performed and will be carried out during the Preliminary Engineering phase.

18. Access

The existing roadway cross section within the project limits consists of two (2) 12' travel lanes, one (1) 13' & variable width auxiliary lane with a 1' outer shoulder, and a 3.75' inner shoulder. The auxiliary lane includes a westbound approach on-ramp from Clifton Avenue and off-ramp to Orange Street (turning right) and 6th Street (bearing straight) following the east bridge abutment. There is a signalized intersection at Orange Street and 2nd Street.

The City of Newark has jurisdiction under the structure. No security fencing has been placed around piers. NJ Transit ROW passing under the structure is secured by fencing.

No driveway access exists within the project limits.

For further detail of access on/off ramps, refer to the SLD and aerial photographs in Appendices C and E.

19. Bicycle and Pedestrian Compatibility

Bicycle traffic is not accommodated within the project limits of Route I-280 WB, in accordance with its classification as an Urban Interstate highway. The existing safety walk can be accessed from Clifton Avenue, 6th Street or Orange Street by pedestrians. No gate or fencing currently obstructs pedestrian access.

20. Current Projects

There is no anticipated construction planned within the project limits of Route I-280 WB, at present.

21. Landscaping

The project scope does not currently address landscaping of existing area.

22. Jurisdiction

The bridge, roadway approaches, on-ramps and off-ramps are all under the jurisdiction of NJDOT. All railroad ROW is under the jurisdiction of NJ Transit. All local roadways surrounding the project limits are under the jurisdiction of the City of Newark.

See Appendix C for project Location Map and Appendix D for Jurisdiction Limit Maps of the study area.

23. Geotechnical Information

Research by the Geotechnical Engineering Unit of NJDOT found no rock cuts within the project limits. Subsurface information is available within the project area. See Appendix D for as-built drawings.

B. Existing Bridge Inventory and Condition

Structure No. 0730-192 has an overall length of 1,052' and an out-to-out width of 45' and was constructed in 1972. The bridge's historical significance is not determined. The structure is a ten (10) span, simply supported, composite, welded steel plate multiple girder bridge, with two (2) FCM welded steel box girder caps at two (2) piers. After the 17th Cycle re-evaluation report was submitted in August, 2012, the structure condition was stated as follows:

Structural Element	Existing Value
Deck	Poor
Superstructure	Good
Substructure	Fair

The overall condition of the bridge was rated structurally deficient due to minor section loss of primary structural elements, mostly attributed to the substructure. A Structural Inventory and Appraisal (SI&A) sheet with an inspection date of 8/26/2012 has been provided in Appendix B.

The superstructure has ten (10) simply supported spans. Four (4) of the bridge spans consist of 8.5" thick concrete decks and the remaining six (6) spans have 8" thick concrete decks. The existing deck has been rated "poor". The deck has been overlaid with bituminous pavement in recent years. The steel superstructure was painted in 2007 and has been rated "good", which agrees with site observations. The concrete substructure has been rated "fair", as shown in the above table.

Typical sections and vertical clearance plans can be found in the 17th Cycle report located in Appendix B, and all detailed structural plans can be found in the as-builts located in Appendix D.

C. Summary of Existing Deficiencies

Information gathered from available as-built plans, combined with data obtained from field visits, bridge re-evaluation reports, SME, NJDOT Management System outputs and correspondence with SMEs, and the Tier II Screening report were used to identify areas of deficiency according to current design criteria.

The structure is classified as structurally deficient due to the poor condition of the concrete deck that is contaminated. Since the previous inspection in year 2012, the overall condition of the bridge has remained the same.

The structure has been classified with a sufficiency rating of 52.7. The Bridge Management System (BMS) designated a Priority Rank of 3. Deficiencies with the deck, substructure, and safetywalk have been identified.

The computed load ratings are greater than the inventory rating for all vehicles. Load posting is not required, according to the NJDOT SI&A report.

Based on the 17th Cycle re-evaluation report, the Tier II Screening report, and site visits, critical roadway and structural deficiencies include:

<u>Structural Deficiencies</u>

- Approximately 40% contaminated deck concrete.

- Deck span 1 exhibits fine transverse cracks with efflorescence at mid-span.
- West abutment deck joint compression seal is loose along the spalled concrete header areas.
- Pier 2 contains moderate edge spalling of concrete headers with a loose compression deck joint seal.
- Spalling of concrete headers at east abutment with loose deck joint seal.
- Pier 9 bridge parapet contains a broken junction box cover plate with exposed wire.
- Girder 3 west bearing is missing anchor bolt nuts.
- East abutment fascia girder web contains a large hole near the end with section loss up to 1/8".
- Contracted rocker bearing (typical for all bearings at abutment).
- East abutment breast wall shows several incipient spalls with rust stains.
- East abutment concrete slope protection undermining of up to 3" with erosion.
- Northeast wingwall exposed footing about 40' from end of east abutment.
- Welded steel box pier 6 and 7 cap (fracture critical) with minor pitting in bottom flange. Light to moderate rust at bearings.
- Pier 5 north column contains incipient spalling at east side, top half.
- Pier 5 concrete cap contains several incipient spalls on the underside.

Roadway Deficiencies

- Substandard horizontal, sag vertical, and crest vertical SSD.
- Substandard superelevation rate at multiple locations.
- Substandard maximum grade (Sta. 655+75 to Sta. 658+60).
- Substandard inner and outer shoulder widths over entire project limits.
- Substandard minimum vertical clearance at 6th Street overpass.
- Outdated guiderail at bridge approaches.
- Substandard drainage inlets and consistent flooding due to clogged basins.
- Bituminous concrete patched area over large pothole in right lane near the west abutment (rubberized material).

D. Maintenance Issues

No report was received from NJDOT Maintenance Department. However, the 17th Cycle report noted multiple fully clogged drainage scuppers. These substandard basins presented minor flooding during rainfall events as recently as 2011, and are further discussed in the Tier II Screening report.

E. As-built Plans, Right-of-Way Maps & Jurisdictional Limit Maps

See Appendix D for As-built Plans:

- Section 7D, From Sixth Street to the Newark City Railway 1972
- Section 1H, 2J, 3N, 4P, 5V, 6W, 7AC & 8J (Parapet Modification) 1990
- Section 7AA, Ramp Improvement at First Street 1998
- Route I-280; Contract No. 006053070, Laurel Ave. to 6th St. Pavement Repair 2010

Right-of-Way Maps and Jurisdictional Limit Maps are also provided.

IV. TRAFFIC AND CRASH SUMMARY

A. Traffic Operations

Based on field visits, meetings with local officials and the NJDOT, it was recommended that a detour be avoided. Thus, all proposed alternatives must allow for continuous traffic flow during the construction stage. Lane closure sequence and staging plans can be found in Appendix H. No temporary bridge is proposed for this rehabilitation project.

Westbound morning traffic peaks at approximately 4,363 vehicles/hour between 6:00 AM – 9:00 AM and afternoon traffic peaks at approximately 4,722 between 4:00 PM – 6:00 PM. For traffic volume tables and graphs, see Appendix L.

B. Traffic Data

A traffic count program was conducted to collect data on the mainline westbound roadway and the ramps near the east and west ends of the project for evaluating the weaving condition. NJDOT contracted Louis Berger Group to perform the traffic counts, which were conducted between Wednesday, January 2, 2013 and Friday, January 4, 2013. Automatic traffic recorder (ATR) counts were taken over a 48-hour period.

In addition, turning movements at the 2nd Street and Orange Street intersection were conducted on Thursday, February 21, 2013 for traffic signal warrant analysis as requested by City of Newark during the Tier II Screening process. Data was recorded between 6:00 AM – 6:00 PM. See table below for summary of results:

Count Station (Milepost)	Source	Date Range	Time	WB AADT
3-9-785 (MP 12.65)	BTDD	10/03/11 – 10/05/11	48 hours	45,997
3-9-785 (MP 12.65)	NJDOT Traffic Counts Website	09/16/08 – 09/18/08	48 hours	50,682
3-5-055 (MP 13.80)	NJDOT Traffic Counts Website	09/16/08 – 09/22/08	152 hours	35,803

The entrance ramp from 1st Street and the exit ramp to 6th Street are located upstream of MP 12.65 and downstream of MP 13.80 in the westbound direction. Therefore, the actual traffic volume at the project site is expected to be up to 10% greater than the 2011 volumes obtained from BTDD. The 9% reduction in traffic volumes from 2008 to 2011 at Station 3-9-785 is consistent with statewide trends over the past 5 years, primarily due to poor economic conditions and associated reductions in vehicular travel.

Traffic signal is warranted at the intersection of 2nd Street and Orange Street. Out of the nine warrants analyzed, two warrants for signal (Four-Hour Vehicular Volume and Peak-Hour Vehicular Volume) were met.

The weaving analysis of the existing condition shows that the Level of Service (LOS) at the project location has been classified “F”.

Signal Warrant and Weave analysis reports can be found in Appendix L.

C. Crash Data Analysis and Crash Diagram

Crash data for Route I-280 westbound MP 13.30 to MP 13.60 for the period between January 1, 2008 and December 31, 2010 were generated by NJDOT Bureau of Transportation Data and Safety. The crash rate is 4.63 per million vehicle-mile (MVM) for westbound roadway. The crash rate is extremely high compared to the 2010 Statewide Crash rate at 1.81/MVM. A summary of the crash history at the intersection is provided below:

Crash Types	2008	2009	2010	Total	Percentage	2010 Average
Same Direction – Rear	13	28	9	50	70.42%	47.63%
Same Direction – Side	6	5	0	11	15.49%	N/A
Overturned	0	0	1	1	1.41%	0.74%
Fixed Object	1	2	1	4	5.63%	10.42%
Non-Fixed Object	2	0	1	3	4.23%	0.94 %
Parked Vehicle	0	1	0	1	1.41%	N/A
Other (Backing)	1	0	0	1	1.41%	N/A
Total	23	36	12	71	100%	N/A

Same Direction – Rear crashes are an indicator crash type for substandard stopping sight distance (SSD) within horizontal curve and crest vertical curve (CSDE). It is the highest crash rate within the project area and is higher than the 2010 statewide average. This shows that the substandard stopping sight distance may have contributed to the high crash rate at this location.

Same Direction – Side crash is an indicator crash type for substandard superelevation (CSDE). It is the second highest crash type in the project area. This shows that the substandard superelevation may have contributed to the high crash rate at this location.

In addition, over half of the Same Direction – Rear end and Same Direction – Side crashes occurred during peak hours of 6:00 AM to 9:00 AM and 4:00 PM to 7:00 PM. This indicates the traffic congestion may also contribute to the higher than average crash rates.

For Crash Diagram of the project limits, see Appendix K.

D. Traffic Volume Forecasts

The New Jersey Transportation Planning Authority (NJTPA) database for the 2030 Regional Transportation Plan (adopted August 24, 2009) was consulted for growth rates within the project limits and surrounding municipalities. The NJTPA utilizes a base year of 2000 and issues forecasts for year 2030 in the categories of population and employment, as follows:

NJTPA Forecasts	Population		Employment	
	2000	2030	2000	2030
City of Orange Twp.	32,870	36,560	8,270	9,760
Annual Growth Rate	0.37%		0.60%	
East Orange City	69,820	78,340	18,900	22,190

NJTPA Forecasts	Population		Employment	
	2000	2030	2000	2030
Annual Growth Rate	0.41%		0.58%	
Irvington Township	60,700	67,150	10,950	12,910
Annual Growth Rate	0.35%		0.60%	
City of Newark	272,540	311,840	160,010	180,420
Annual Growth Rate	0.48%		0.43%	
Nutley Township	27,360	29,540	17,340	19,770
Annual Growth Rate	0.27%		0.47%	

The arithmetic mean of these respective growth rates were applied to ATR counts collected along Route I-280 westbound within the project limits, resulting in Growth Rate (GR) of 0.515%. To be conservative, the Actual GR used for this project is 0.6%. By applying this growth rate to the Route I-280 westbound traffic counts that were collected under this project, the construction year (2015) and the project year (2035) have interpolated growth factor multipliers of 1.024 and 1.127, respectively.

TRAFFIC VOLUMES (1-Way, WB)	Base Yr. 2011	Construct Yr. 2015	Design Yr. 2035
AM Peak, VPH	4,092	4,191	4,612
PM Peak, VPH	4,722	4,836	5,322
ADT, VPD	56,320	57,684	65,015

V. SOCIAL, ECONOMIC, AND ENVIRONMENTAL SCREENING

A. Community Outreach

Concept Development Phase

A community outreach meeting was held with the Office of Division of Traffic and Signals, City of Newark to discuss the preliminary preferred alternative (PPA) for this project. The meeting was held on February 11, 2014 and was attended by design consultant URS, NJDOT, and City of Newark officials. The NJDOT project manager stated the purpose of the project was to replace the concrete deck for I-280 WB Structure No. 0730-192 due to structural deficiencies, as well as to alleviate the geometric, congestion and crash issues where feasible. URS provided a brief description and summarized the existing conditions of the structure, project history, goals, traffic analysis and substandard features such as the S-curve, substandard sight distances, etc. The PPA was stated to be the only alternative that yielded an acceptable LOS for both present and future conditions. City representatives agreed with URS's stated benefits of the PPA.

A Newark official stated that the proposed signal at 1st Street should be coordinated with Essex County. Possibility of providing two (dual) left turns onto the on-ramp from 1st street to the I-280 WB should also be investigated by performing traffic analysis. The study area should include all the intersections from UMDNJ to 1st street, and that this improvement should be made part of the current project, if possible. However, if analysis was to indicate that widening of the road is required and as a result ROW taking would be needed for implementing these improvements, then this would result in a different project. The NJDOT concluded that the traffic study is outside the scope of the present work and assured Newark officials that the study will be taken care of during the next design phase.

The NJDOT recommended the local State Senator should initiate the traffic improvement request and submit a problem statement to DOT traffic unit for further evaluation. City of Newark would provide NJDOT with resolution of support. Newark agreed to initiate the problem statement.

In addition, a Public Information Center (PIC) was held at the Sussex Avenue School on May 28, 2014 in the City of Newark. Local residents were informed of the project scope of work, and Preliminary Preferred Alternative. Comments from local residents generally focused on concern over pedestrian safety in the vicinity just outside the project limits, along the 1st Street corridor passing under Route I-280 EB/WB, to the Sussex Avenue intersection. Meeting discussions have been documented in Appendix P.

Tier II Screening Phase

During the Tier II Screening phase, a meeting with Local Officials was held. The meeting took place on July 17, 2012 and was attended by design consultant URS, NJDOT, City of Newark, and Essex County officials. The following key issues were addressed during the meeting:

- Newark Engineering Dept. informed NJDOT about planned city construction projects near this project area. No major projects were anticipated for the construction year (2015).
- Newark Engineering Dept. pointed out that all Route I-280 traffic coming from the part of the city north of Route I-280 is currently routed onto Orange Street. From Orange Street, the traffic needs to make a left turn to the ramp entrance at the 2nd Street/ Orange Street intersection. This intersection is unsignalized and unsafe, with

a heavy left-turning traffic movement. Mr. Nata would like the NJDOT to consider improvements to this condition.

- The project area does not contain any county roads.

B. Noise and Air Quality

Sensitive receptors exist in the vicinity of the project area, but existing noise levels should not significantly change since the project will not increase capacity or result in substantial change in vertical or horizontal alignment. This project will not have a significant effect on traffic noise levels in the area. The project qualifies as a Table 2; therefore no air quality analysis is required. The project should not require a Hot Spot analysis.

C. Socioeconomics

Because the project is an online bridge deck replacement, adverse community impacts are not anticipated. The project will not result in any residential acquisition or displacements, nor will it bring travel lanes closer in proximity to residential dwellings, community facilities or other sensitive receptors.

D. Cultural Resources

Nine (9) cultural resources or districts were identified in proximity of the proposed project. The Route I-280 WB Structure No. 0730-192 at MP 13.4 is neither historic nor a contributing element to any of the identified historic districts. The project meets the requirements of "Activities which are not undertakings according to the NRHP Act (7:4-1.3)" and therefore have Limited or No Effect (revised 3/4/2011) under in kind replacement of bridge decks that do not involve changes to the bridge parapets or otherwise alter the overall appearance of the bridge (Item #20).

The structure is not classified as Historic. At this time no further consultation is anticipated with SHPO. However, if there is any change to the project scope, SHPO will be consulted concerning potential effects.

E. Section 4(f) Properties

Although four (4) historic districts and Section 4(f) properties exist in proximity to the proposed project, the activities of the project most likely will not result in the use of – or impact to – those resources.

F. Highlands / Pinelands

The project area is not within any recorded highlands or pinelands.

G. Wetlands

There may be impacts to a riparian zone of a nearby lake. If any wetland or wetland ditch habitats are discovered upon further review of the site, a Freshwater Wetland (FW) permit may be required.

H. Reforestation

The project will not have impact to existing trees.

I. Floodplain

The project limits are not located in a floodplain area. However, the floodplain area of the Branch Brook Lake extends to within 50 -100 feet of the Rt. 280 WB East Abutment. Floodplain Map from the FEMA National Flood Insurance Program is located in Appendix I.

J. Sole Source Aquifer

The project limits do not contain a sole source aquifer and the project does not anticipate any impact.

K. Threatened/Endangered Species

No threatened or endangered wildlife habitats are located within project limits and the project does not anticipate any impact.

L. Category 1 Waters

The project limits do not contain Category 1 waters and the project does not anticipate any impact.

M. Vernal Pools

The project limits do not contain vernal pools and the project does not anticipate any impact.

N. Stormwater

Based on the as-built plans and field observations, the subject bridge carries existing drainage structures including scuppers and drainage pipes.

Seven (7) existing inlets on both sides of Route I-280 WB roadway in the West area were analyzed. The results show that the spread widths at these inlets are less than the maximum allowable spread width specified in the NJDOT Roadway Design Manual (Section 10.5.5).

Flooding incidents have been recorded in the project area contributing to the high ranking in Drainage Management Unit's DMS ranking list. A review of the existing geometry, as shown on the as-built plans does not generate any conclusion regarding the cause of the flooding. NJDOT reported the flooding location was near Exit 13 (6th Street crossing).

During the Core Group Meeting on August 15, 2012, NJDOT Construction North expressed that the flooding problem is mainly located at the 6th Street crossing and the Clifton Avenue crossing, which are both roadway low points. The system was not sufficient to handle the drainage and would need additional inlets to resolve the flooding problem

A site visit was conducted shortly after a rain storm on August 27, 2012. It was observed that the roadway grading near Clifton Avenue crossing and the adjacent Nesbitt Street crossing were very flat. Storm water appears to collect along the gutter rather than draining into the existing inlets. The existing inlets were clear of debris and appeared to work appropriately. It should be noted that the roadway in this area does not have a shoulder. Therefore, it is critical to remove storm water from the pavement as soon as possible to avoid hydroplaning. Additional inlets within this area would improve the flooding problem shown in the Drainage Management System.

It is recommended that the existing drainage system near the 6th Street crossing and the Clifton Avenue crossing be evaluated during the Preliminary Engineering phase.

O. Hazardous Waste

Based on the field investigation and associated research, it was determined that the project has a potential for involvement with hazardous waste or contaminated sites. The hazardous waste screening identified, an area classified as historical fill per NJDEP mapping and is an active NJDEP case against NJDOT Route I-280 Section 7 (PI #G000011696) with known contaminated soil reuse, an abandoned industrial building at 155 1st Street, NJ Transit Essex & Morris Line and Light Rail. Once a more detailed plan becomes available, a

reevaluation will be required to determine if the project will impact any of these sites and/or require additional investigation in the Preliminary Engineering phase.

P. Anticipated Environmental Permits or Approvals

The following environmental permits or approvals are anticipated:

NJDEP Water Quality Certification and NJDEP Flood Hazard Area permit may apply depending on the extent of the disturbance as designed in the Final Design process.

- NJDEP Water Quality Certification
- NJDEP Flood Hazard Area Permit
- CED Environmental Documentation
- Freshwater Wetland (FW) Permit
- Consultation with the Hazardous Waste Unit for context sensitive designs.

Q. Environmental Summary with NEPA Documents Required

Based on anticipated project impacts, the NJDOT determined the project will not cause significant environmental impact. Therefore the National Environmental Policy Act (NEPA) classification is expected to be a Categorical Exclusion and Environmental Assessment (EA) is not required.

VI. EVALUATION OF CONCEPTUAL ALTERNATIVES

A. Categories

Three (3) distinct categories were considered for the conceptual design of this bridge: No Build, Bridge Replacement, and Bridge Rehabilitation.

1. No Build

The No Build alternative would continue on-going maintenance repairs on the existing bridge. This option was eliminated from further discussion because it does not meet the project Purpose and Need, and presents a safety concern for the traveling public.

2. Bridge Replacement

Due to the good condition of the superstructure, and overall structural integrity, total bridge replacements goes beyond the scope of the Purpose and Need statement. The bridge is not rated functionally obsolete — poor and fair condition is limited to the deck and substructure, respectively. These deficiencies are best addressed through bridge rehabilitation.

3. Bridge Rehabilitation

Bridge Rehabilitation is the only category that satisfied the project Purpose and Need statement. Rehabilitation adequately addressed the structural deficiency of the bridge due to the poor condition of the concrete deck, which is 40% contaminated. Therefore, it is recommended that the existing deck be replaced.

Pier 6 and pier 7 on the EB and WB share the same substructure. In order to have uniform seismic response, it is recommended that existing bearings at these two (2) locations be replaced with seismic bearings. This seismic retrofit has been included in the Project Cost Estimate (Appendix G).

Use of 3D survey technique should be considered during Final Design phase. Exact geometry of the underlying stringers would be beneficial for the precast deck design. Information on sweep and camber information on the existing superstructure is very helpful for precast deck detailing.

During Final Design, the selection of the non-shrink grout system for the precast deck design should be investigated. Factor such as Resistant to freeze/thaw & sulfates, high flowability, suitable for pumping in tight spaces, ambient temperature range for installation, surface preparation needs, color, cost, and strength (compressive, tensile and flexural) gain at early hours. Applicable grout system such as Polymer (Methacrylate based) Grout, Epoxy Based grout and Ultra-High Strength Performance Concrete (UHPC) and others should also be studied.

B. Staging / Maintenance of Traffic

The traffic control and staging will focus on the construction of the deck replacement. The following two (2) alternatives were analyzed:

1. Cast-In-Place Concrete Deck Construction with Two Lanes Maintained at All Times

Two (2) thru lanes will be maintained during all stages. The rest of the bridge will be closed to allow construction. Traffic from the Clifton Avenue on-ramp will be merged to the mainline before the bridge. Traffic will exit to the 6th Street off-ramp after the bridge.

2. Precast Panel Deck Construction with Nightly Lane Closures

A single lane will be maintained during the allowable lane closure hours allotted by Traffic Operations North. Precast panels will be installed after demolition each night, between 9:30 PM and 5:30 AM. The normal lane configuration will be restored each morning. In addition, approximately three (3) weekend closures will be required for the construction of backwalls and approach slabs. In the Scope Team meeting, NJDOT suggested the use of moveable barrier for the nightly lane closure to minimize the barrier setup and removal time. However, this is not recommended because of the high cost and the short length of work zone. Approximately 100' of barrier with Class Joint Type A would be required each night; the time for setup and removal is not expected to be long. Therefore it is expected that there would be enough time for the construction and a moveable barrier would not be necessary.

Approach slab construction and backwall reconstruction will also be with precast concrete construction. These operations may require single-lane weekend closures.

An alternative analysis of the staging schemes is summarized below:

Staging Scheme	Pros	Cons
Cast-In-Place Concrete Deck Construction with Two Lanes Maintained at All Times	• Construction cost is lower than precast construction. • 24/7 construction is possible. No daily work time limit for contractor.	• Live Load vibration may affect the product quality (deck cracking). • Impact to traffic during the peak hours. • Track outage duration and overhead restrictions will limit the time for installing under deck shielding and stay in place forms
Precast Panel Deck Construction with Nightly Lane Closures	• Improved product quality. Deck is fabricated in controlled environment. • Traffic impact is limited to overnight hours only.	• Relatively, construction cost may be higher than the cast-in-place alternative. • Higher risk for contractor to overrun the allowable lane closure hours. • NJ Transit prohibits use of large cranes to be placed on the deck in the spans over the tracks. Limited track outage duration will affect the construction productivity if cranes are used for precast construction.

As discussed in the Tier II Screening report, widening of the bridge offers advantages, as listed below:

- Providing a right shoulder to the roadway, thus improving overall safety; and

- Providing a wider roadway section for traffic use during construction staging.

Due to the lack of ROW and physical space prohibiting additional pier columns, the widening can only be at a maximum of 6'. This added width will provide a usable shoulder, even though the proposed width remains substandard. The additional 6' would not provide much help for the construction staging other than offering more space for the contractor to work. The widening is estimated to cost an addition of approximately $2.7 million. Therefore, bridge widening is excluded from further evaluation.

Other options considered, but not developed, include:

- Temporary Bridge – The horizontal geometry does not allow for installation; or
- Crossover – The eastbound roadway is at a different elevation than the westbound roadway for the crossover is not feasible.

C. Controlling Substandard Design Elements (CSDE) and Reasonable Assurance

Due to the deck replacement scope of this project, most of the geometric design values cannot be improved. Improvements to the superelevation rates may be feasible and may be discussed with NJDOT SME in the Preliminary Engineering phase. As this project is on the Interstate, the Design Exception shall be submitted to FHWA for concurrence.

Refer to Appendix N for detailed Memorandum, with record of all the Controlling Substandard Design Elements in the project area

D. Life Cycle Cost Analysis

Life Cycle Cost Analysis is only applicable to complete Bridge Replacement, e.g. calculating the net present value of new capital over a bridge's service life. The value of each alternative is presented in the Alternative Comparison Matrix (Appendix F) and the cost estimate (Appendix G).

E. Discussions with Subject Matter Experts / Stakeholders

On May 16, 2013, a meeting was held at the project site in Newark, New Jersey. The attendees consisted of the NJDOT Core Team and design consultant URS. The goal of the field visit was to discuss possible traffic control schemes for the bridge deck replacement work. The three (3) original conceptual alternatives considered were as follows:

- Cast-in-place construction with long term lane closures;
- Combination cast-in-place construction and precast concrete panel construction; or
- Complete precast deck replacement with lane closures limited to weekends and periodically during off-peak hours.

A key concern addressed during this meeting was the removal of the existing safetywalk. It was suggested that the entire parapet be removed and construction barrier be placed instead. URS confirmed that the parapet's structure stability would be red if the safety walks were to be removed. NJDOT expressed that movable barrier is not desirable.

Action items from this meeting included the following:

9. URS to investigate the feasibility of widening the bridge on the left side to facilitate 11' lane widths for Alternative 1.

10. URS to investigate if the existing drainage pipe on the bridge meets current standards.

11. URS to investigate the use of half-section construction barrier.

On August 22, 2013, a Scope Team meeting was held at the NJDOT E&O Building (Room CR 6B) in Trenton, New Jersey. Attendees included representatives from the NJDOT, FHWA, NJ Transit (NJT), and URS. The PM explained that the Division of Project Management (DPM) has initiated the Concept Development study for Deck Replacement and Lengthening of Weaving Distance for the project limits of Route I-280 WB. [Prior to this meeting, the alternatives were reduced to two (2), thus eliminating the combination of CIP and precast construction.] URS presented the following alternatives to the group:

- Alternative 1 – Cast-in-place construction with long term lane closures; or
- Alternative 2 – Complete precast deck replacement with closures limited to weekends and periodically during off-peak hours.

Seismic retrofitting for pier 6 and 7 was discussed, as well as under-deck shielding required under all spans to account for the NJT RR tracks, along with local streets below. NJT only allows installation of shielding between outages (typically between 2:15 AM – 4:20 AM). NJT also noted the bridge must be grounded and barrier height in spans above railway must have a 6'-6" minimum height. URS explained that this track outage restriction is severe and would impede construction schedule significantly. If this restriction could not be waived, the CIP method would be eliminated and precast construction with gantry system would be the only feasible method of construction.

Action items for this meeting included the following:

- URS to investigate the feasibility of a gantry crane system for precast construction.
- URS to finalize the construction stage durations, utilizing the railroad restrictions and outage hours.

On January 7, 2014, a Core Group meeting was held at the NJDOT E&O Building (Room 3B) in Trenton, New Jersey to discuss and recommend the preferred structural and highway alternative. The consensus from the Core Group was that precast concrete construction (Alternative 2) was the preferred structural alternative, mainly due to the shorter duration of construction. When question by the NJDOT about the potential for early stage deck cracking due to live load deflection, URS stated this would be eliminated with precast construction. URS also noted that closure pours would be polymer grout. Highway Alternative 4 was chosen as the preferred highway alternative.

Action items for this meeting included the following:

- URS to determine if the project is in a flood plain.
- URS to inquire that the NJT will approve a gantry system over NJT tracks.
- URS to determine if the project has ROW impacts,
- URS to determine the vertical clearance over the lightrail subway tracks.
- URS to evaluate the feasibility of merging to one lane after the structure, onto the 1st Street ramp.

For meeting synopsis with local officials, refer to Section V.A of this report. For a complete set of meeting minutes and other correspondence, see Appendix P.

F. Conceptual Alternatives – Bridge Rehabilitation

The criteria used to access the bridge rehabilitation design alternatives are as follows:

- Maintain vehicle and pedestrian traffic during construction;
- Minimize ROW impacts;
- Minimize delays or impedance of the traveling public;
- Avoid environmental impacts;
- Minimize construction duration;
- Remove structure from the Bridge Management System and other management system ranking priority lists; and
- Minimize design and construction costs.

Where feasible, implement cost effective geometric roadway and drainage improvements, as related to the deck replacement that will reduce or eliminate controlling substandard design elements.

Environmental constrains were identified for proposed alternatives based on the GIS mapping and NJDEP database information, e.g. Environmental Screening Report and Environmental Constraint Map. An NJDEP Freshwater Wetland permit may be required.

Conceptual alignments were prepared using available aerial photographs, record plans,

Each of the Structural Alternatives has been considered separately from Highway Alternatives, which address the roadway concerns at the approach and off-ramps at opposing ends of the bridge. The following alternatives are described in this section:

Structural Alternatives

Alternative I – Cast-in Place Construction with Long Term Lane Closures

Alternative I utilizes cast-in-place construction method with long term lane closures to replace the existing bridge deck. Two through lanes will be maintained at all time during the various stages of construction.

Stage 1 construction will start with the north side of the bridge with two lanes of traffic moved to the south side. The parapet will be replaced with the standard TL-5 parapet and the safety walk will be removed during Stage 1. This will allow additional width for future stages of construction. The construction zone will cover the two bays on the north side. While the minimum lane width is 11', the lane widths between Pier 6 and Pier 8 will be 10'-6" (substandard) due to the limited width and the location of the existing stringers. The entrance and exit near the east and west ends of the bridge will be in the form of direct merge and split as shown on NJDOT Standard Details TCD 18 and TCD-20.

In Stage 2, the construction zone will be moved to the south side of the bridge with two lanes of traffic moved to the north side. The construction zone will cover the two bays on the south side. The parapet will be replaced with the standard TL-5 parapet. A minimum lane width of 11 feet will be maintained throughout the construction zone. The entrance and exit near the east and west ends of the bridge will be in the form of direct merge and split as shown on NJDOT Standard Details TCD 18 and TCD-20.

In Stage 3, the construction zone will be moved to the central portion of the bridge with one lane of traffic (cattle chute) along each north and south side of the bridge. The construction zone will cover the remaining central one bay of the bridge. A minimum lane width of 11 feet will be maintained throughout the construction zone. The entrance and exit near the east and west ends of the bridge will be in the form of direct merge and split as shown on NJDOT Standard Details TCD 18 and TCD-20.

Alternative II – Precast Concrete Panel Construction with Weekend Lane Closures

Alternative II utilizes precast concrete panel construction method during weeknight and weekend lane closures to replace the existing bridge deck. The overall staging is the same as Alternative I. However, the majority of construction will only be during weekends while preparatory work is performed using off-peak nighty closures (saw cutting the deck etc.). The entire bridge will be open to traffic during weekday peak hours. It is recommended that one lane be maintained through weekends for better contractor efficiency. Traffic Operation North would need to approve these types of closures.

Alternative III (Not Considered in CDR) – Combination of Cast-in Place Construction and Precast Concrete Panel Construction

Alternative III utilizes cast-in-place construction method with long term lane closure to replace the existing bridge deck for all the spans as described above except for the two bays along the north side of the bridge between Pier 6 and Pier 8. Instead, precast concrete panels will be used in this area. A minimum lane width of 11' will be provided in Stage 1 of Alternative II through the entire work zone. As a result, the area between Pier 6 and Pier 8 will not be constructed in Stage 1. This area will be constructed in Stage 1A using precast concrete panel construction method with single lane traffic maintained during weekends. Stages 2 and 3 are the same as Alternative I.

Refer to the Appendix H for the drawings of the alternatives.

<u>Highway Alternatives</u>

- Alternative I – Existing Alignment to Remain.
- Alternative II – Terminate On-Ramp from Clifton Avenue to Route I-280 WB.
- Alternative III – Widen Route I-280 North of the Bridge.
    - Clifton Avenue auxiliary lane to continue as a though lane.
    - Auxiliary lane merges with Route I-280 WB prior to 6th Street overpass.
- Alternative IV – Widen Route I-280 South of the Bridge.
    - Clifton Avenue auxiliary lane to continue as a though lane.
    - Proposed retaining wall constructed to accommodate widening.
    - 1st Street on-ramp reduced from 3 to 2 lanes.

Framing and Construction Staging plans for each alternative are provided in Appendix H and the Alternatives Comparison Matrix can be found in Appendix F.

G. Preliminary Preferred Alternative

The Preliminary Preferred Alternative (PPA) is **Structural Alternative II – Precast Concrete Construction** and **Highway Alternative IV – Widen Route I-280 South of the Bridge**. These PPAs were agreed upon at the January 7, 2014 Core Group meeting. Structural Alternative I was not preferred due to longer construction duration and the

associated impacts to the traveling public. Also, vibration from adjacent traffic during construction would increase the potential for deck cracking. Highway Alternative I was not preferred due to not addressing the substandard weave condition or the above average crash rates, yielding an LOS of “E” for the year 2035. This alternative fails to solve the congestion and safety issues presented in the problem statement. Highway Alternative II was not preferred due to the severe congestion that would result from eliminating the on-ramp from Clifton Avenue. Alternative III would slightly improve the weave condition and crash rate, but the LOS for the year 2035 would still be “F”. This high level of congestion, reduced by implementing Highway Alternative IV was the main reason for its selection.

See Appendix H for the PPA plans, and Appendix F for the Alternative Matrix.

H. Construction Staging

Refer to Appendix H for PPA Construction Staging plans.

VII. CONCEPT DEVELOPMENT RECOMMENDATION

The project need is confirmed and it is recommended that the project be presented to the CPC Screening Committee* to obtain approve to advance this study to the Preliminary Engineering phase.

It is recommended that this bridge should be rehabilitated in accordance with **Structural Alternative II – Precast Concrete Construction** and **Highway Alternative IV – Widen Route I-280 South of the Bridge**.

The following project costs are estimated:

Preliminary Engineering (CED)	$0.35M
Final Design	$0.85M
Construction Engineering	$3.30M
Subtotal	$4.50M
Construction Cost	$16.50M
Contingencies (15%)	$2.50M
Total	**$23.50M**

The project is listed in the Statewide Transportation Improvement Program FY 2012-15 Study and Development Program (see Appendix A) and will most likely be allocated to the Bridge Deck/Superstructure Replacement Program. Traffic projections and construction cost estimated in this CDR are based on construction starting in calendar year 2016.

A timeline for events is proposed as follows:

Preliminary	Begin FY 2015
Final Design	Begin FY 2016
Right-of-Way / Permitting	Not Anticipated
Construction	Begin FY 2017

Documentation of important decisions that were made during the CD phase have been recorded in the Design Communication Report (DCR), which can be found in Appendix Q. At present, no DCR's have been initiated.

Activities that will be required in the Preliminary Engineering (PE) phase are identified in the PE Scope Statement, along with clarification and approvals by SMEs per their respective unit (see Appendix U).

APPENDICIES

(A - U)

Appendix A

Problem Statement / STIP

Tier 1 Screening Report
I-280, Westbound Ramp, Over 1st & Orange Streets and NJ Transit tracks, Problem Statement: DB# 12318
MP 13.40
City of Newark, Essex County
Bureau of Capital Program Development

The following is a Tier 1 Screening Report for the Problem Statement (PS) location shown above submitted by the Bureau of Structural Evaluation & Bridge Management and generated by the Bridge Management System (BMS).

Introduction: Tier 1 Screening Process Overview

As stated by the Capital Project Delivery Process:

"When a problem statement is initiated, the Division of Capital Investment Strategies facilitates a Tier 1 Screening process. Tier 1 Screening is undertaken in order to conduct a preliminary review of a problem statement and weigh its merits against other competing problem statements statewide, using information contained in the Department's appropriate management systems. The outcome of a Tier 1 Screening can be one of the following:

1. Determine if problem statement can be eventually advanced in the project development process, subject to available funding and consistency with CIS goals and objectives;
2. Terminate problem statement due of a lack of need or statement is redundant, being addressed by an existing project;
3. Determine that a quick fix by means of a maintenance work order is appropriate based on SME evaluations or that further analysis of the problem statement is needed via a Tier 2 Screening, and;
4. Table the problem statement for potential future pipeline advancement or Tier 2 Screening when funds become available. When appropriate, a problem statement can be reassigned to a different jurisdiction, such as a toll road authority or other agency.

For each problem statement, CIS updates the problem statement database and notifies the original sender of the resolution."

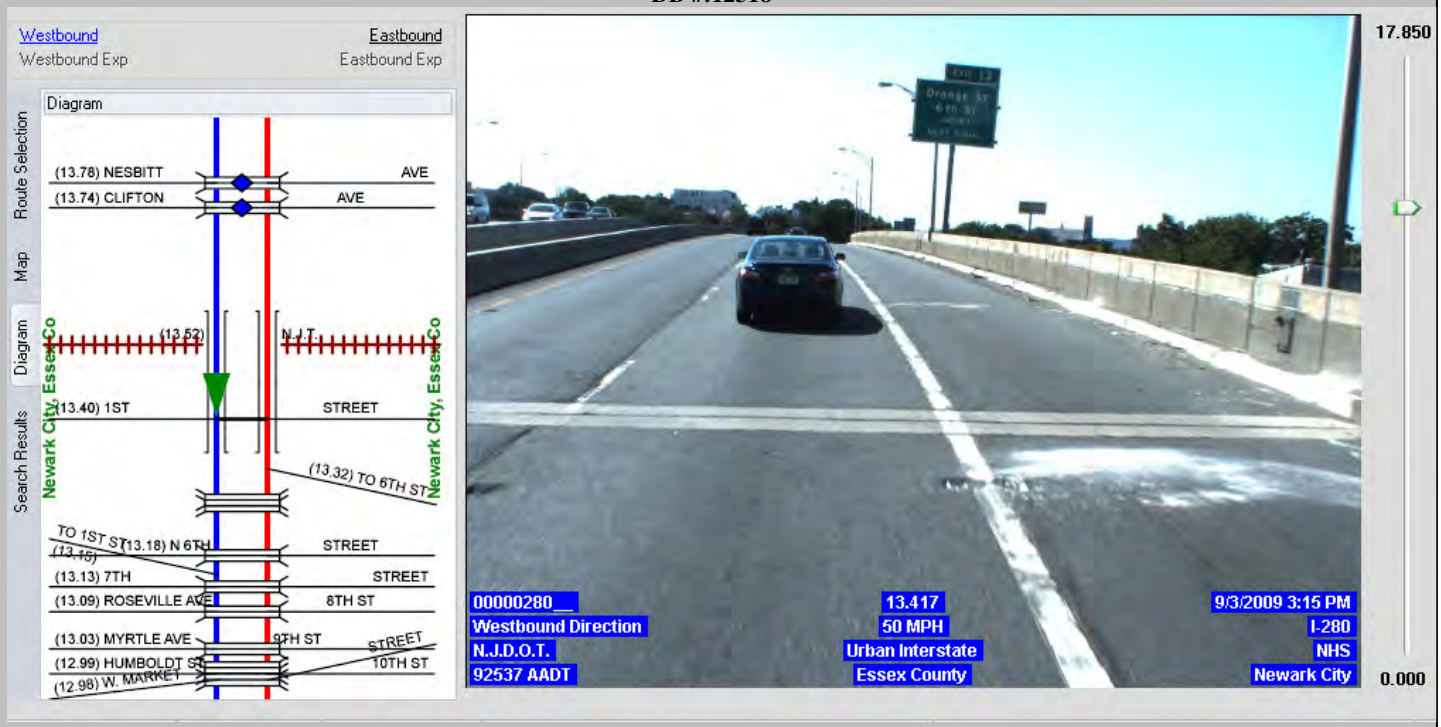
Problem Statement Description:

According to the initiator, a physical condition problem exists where the structure is structurally deficient (SD). The structure has a sufficiency rating of 52.7 and has deteriorated to the point that the bridge deck needs to be rehabilitated or replaced.

Proposed Project Need: The BMS, using Bridge priority rankings, produced an analysis that identified the need for physical improvements required to keep the structure in a state of good repair.

**** See TP-1 Form for more detailed information.**

Interstate 280: Bridge, Ramp over 1st & Orange Streets and NJ Transit tracks, MP 13.4, Westbound Direction
DB #:12318





Management System Evaluation: Capital Program Developments Tier 1 Screening Findings for this PS are as follows:	
Tier 1 Screening: Management System Evaluation	**UPC# 123180: (DB 12318): (Structure number 0730-192): I-280 WB/Ramp, Over 1st & Orange Streets and NJ Transit tracks (Westbound), physical improvements.**
Asset Category	Bridge Assets: Deck Rehab and Replacement, bridge deck repairs.
Description	Bridge carries two lanes with shoulder over NJ Transit and local streets. Bridge was built in 1972 and its historical significance has not been determined. Data from NJ Road Inventory Video Log shows that the roadway exhibits significant pavement patches, holes in pavement, and uneven pavement near expansion plates.
Initiator	Bridge Management System: submitted by Bridge Engineering and Infrastructure Division.
Duplication: Potentially Overlapping Projects	This potential project is located near DB# 09353—Martin Luther King Boulevard, Orange Street Intersection Improvements (MP 14.01-14.21) on I-280. However, there is no bridge structure project that overlaps.
BMS	Structure was given a weighted score of 336, earning a priority ranking of 3/5, with a score of 1 being the highest priority and 5 the lowest. Bridge was given a classification of Structurally Deficient (SD). From a SCIS perspective, problem statements with a Structurally Deficient (SD) classification and a Priority 1 or Priority 2 rating based on the BMS are generally recommended to Tier 2 screening. Given the weighted score, this structure is closer to a Priority 2 than Priority 3 rating. The sufficiency rating for this structure (structure # 2012-150) is 52.7.
CMS	This location of I-280 registered a Congestion Management System (CMS) score of 7.60, a High Priority area that is very congested. In addition, the area is ranked 4th on the list of Bottlenecks on State Highways and ranked in the top 11 percentile system-wide.
DMS	Route 280, MP 13.0 to 14.0 ranks 5th in Drainage Management Unit's DMS Ranking List. Flooding in the vicinity was reported as recently as April 2011. Icing in and around the 1st Street ramp on 280 was also reported three times in the last five years.
Smart Growth Mgmt System (SGMS)	Individually, the Smart Growth Area score is high (perfect scores in Smart Growth Area, Bus Stops, Rail Stations, & Pedestrian Compatibility Index categories). Additionally, the Economic/Social Equity Score totaled 72 out of 100. Improvements in this area would probably have positive benefits towards providing smart growth enhancements.
Complete Streets Policy Evaluation	As the problem statement rests on an Interstate Highway, it is not practical to conduct complete streets for other modes of transportation, such as pedestrian and bicycle.
SCIS Conformance - BMS	This PS is consistent with the following Bridge Asset objectives identified in the FY2013-2022 SCIS: * Reduce by 50 percent the total square footage of deficient decks in NJ (currently 5 million square feet are rated deficient). * Reduce by 50 percent the total number of deficient bridges on the State Highway System (currently 310 bridges on the State Highway System are rated deficient).
SCIS Conformance – DMS	This PS location is consistent with the SCIS goals and objectives for road assets. Using an Asset Management approach, the highest priority areas with respect to drainage are to be evaluated. The area ranks 5th out of 360 areas on the most recent DMS Ranking list, receiving a high priority for repairs.

100%

RUTGERS
Center for Advanced Infrastructure and Transportation

Route 280 in Newark

©Plan4Safety

New Jersey Department of Transportatoin
Bureau of Traffic Engineering and Investigation

Location:
Municipality:
County:
Years of: To:

	DAYLIGHT			NIGHT			Total
	Injury	Property Da	Total	Injury	Property Da	Total	
Animal	0	0	0	0	1	1	1
Fixed Object	4	7	11	5	15	20	31
Non-fixed Object	0	2	2	0	0	0	2
Null	0	2	2	0	0	0	2
Overturned	0	0	0	0	1	1	1
Same Direction - Rear End	22	54	76	6	13	19	95
Same Direction - Side Swipe	2	16	18	3	4	7	25
Struck Parked Vehicle	0	0	0	0	1	1	1
Total	28	81	109	14	35	49	158

[CRASH.MUNICIPALITY in (Newark city) AND CRASH.CRASH_YEAR in (2009, 2010, 2011) AND CRASH.ROAD_SYSTEM in (Interstate) AND CRASH.MILEPOST between 13.2 AND 13.

Route 280 in Newark

4/23/2012

SMS Data Source: Plan4Safety: (Recommend verification from the Bur. of Safety Programs)

- SGMS Evaluation:

Interim Smart Growth Management System

Date: Monday, February 27, 2012

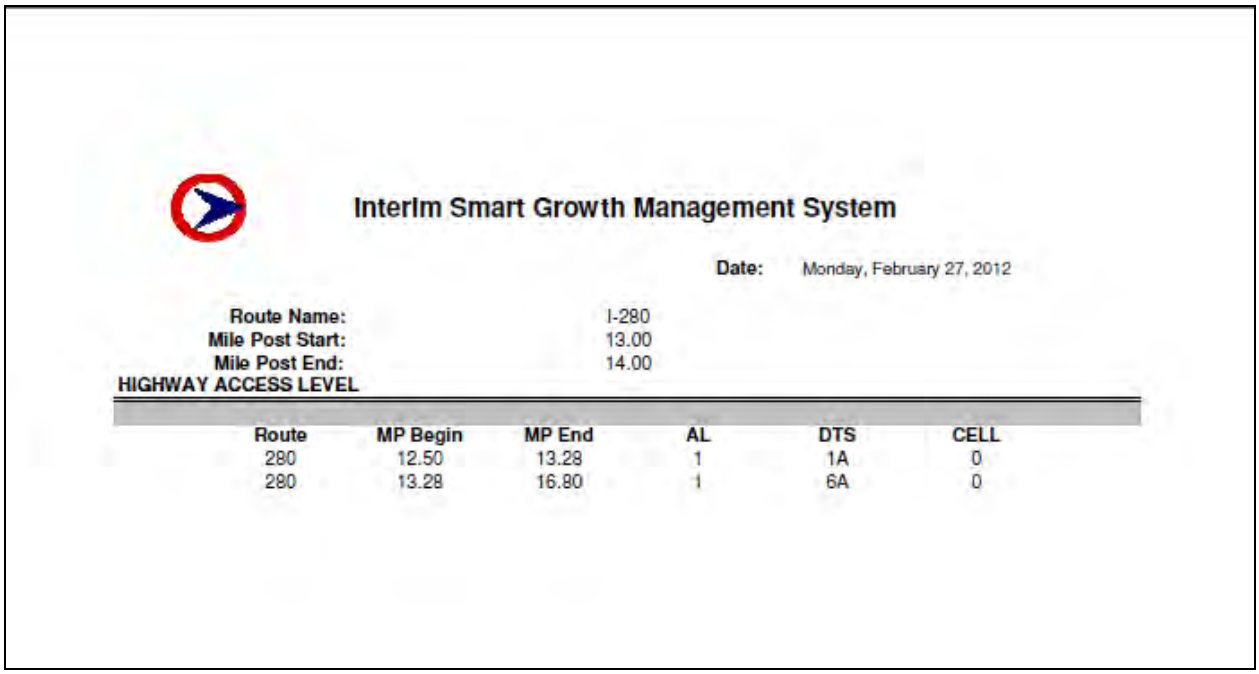
Route Name: I-280
Mile Post Start: 13.00
Mile Post End: 14.00

GENERAL SUMMARY

Smart Growth	Score	Max Score
Smart Growth Area	20	20
Transit Village	0	7
Transit Score	2	2
Bus Stops	10	10
Rail Stations	10	10
Park and Ride	4	4
Bike Trips	0	8
Pedestrian Compatibility Index	8	8
Plan Endorsed Municipalities	0	15
NJ Main Streets	0	8
Preserved Farmlands	0	8
	54	100

Economic / Social Equity Score	Score	Max Score
Transit Hub	0	10
NJRA Identified Municipalities	10	10
Urban Enterprise Zone	15	15
Scenic Byway	0	10
Brownfields	2	10
Median Household Income < Threshold	15	15
Percentage Minority (Non White) > Threshold	20	20
Employment Density > Threshold	10	10
	72	100

Environmental Sensitivity Rating	Check for
Category I Waterways	
High Hazard Zones	
Land Preserved Under Green Acres Program	
Forested Wetlands	
Preserved Farmlands	
Municipal, State, County and Federal Parks	
100 Year Floodplain	
Coastal Area Boundaries	
Highlands Preservation Area	
Highlands Planning Area	
Meadowlands Preservation Area	
Pinelands Preservation Area	
Wetlands	
Critical Environmental and Historic Sites	✓
Plannning Area PA4B and PA5	



Interim Smart Growth Management System

Date: Monday, February 27, 2012

Route Name: I-280
Mile Post Start: 13.00
Mile Post End: 14.00
HIGHWAY ACCESS LEVEL

Route	MP Begin	MP End	AL	DTS	CELL
280	12.50	13.28	1	1A	0
280	13.28	16.80	1	6A	0

- **Tier 1 Screening Recommendations**:

  - Request CPM, Group E, to initiate a Tier 2 Screening to address physical deficiencies as described in the TP-1 Form. Under the SCIS, bridges are to be kept in a working state through rehabilitation, replacement or maintenance. As the SCIS prioritizes bridges that are structurally deficient for Tier 2 Screenings to be initiated, structure 0730-192 would qualify as a candidate for Tier 2.

    This recommendation is based on the Tier 1 Screening findings listed above. More specifically:

    - This PS advances the goals and objectives of the FY 2012-2021 SCIS relating to bridges (reducing by 50% the square footage of deficient bridge decks and reducing by 50% the number of deficient bridges).
    - The Bridge Management System generated this PS, ranking this structure with the 88th highest priority score out of 2381 structures statewide.
    - The location ranked 5th on the most recent Drainage Management System (DMS) scores.
    - The location ranked 4th on the list of Bottlenecks on State Highways for the CMS.

Attachments:

In addition to the TP-1 Form, refer to supporting documentation provided by the Bureau of System's Planning attached to the e-mail:

- Supplemental Problem Statement sheet with photos
- Additional Plan4Safety data
- DMS data
- CMS data

Route 208, Bergen County Drainage Improvements

DB#: 11381
UPC#: 113810

There are drainage problems in 3 locations along this section of Rt. 208. There has been 100 flooding incidents over the past 4 years. These 3 locations have high AADT's and are Ranked #5, #11 and #37 in the Drainage Management System.

COUNTY: Bergen
MUNICIPALITY: Wyckoff Twp Franklin Lakes Boro
MILEPOSTS: 5.3 - 8.5
STRUCTURE NO.: N/A
LEGISLATIVE DISTRICT: 40 **SPONSOR:** NJDOT
ASSET MANAGEMENT CATEGORY: Road Assets: Drainage

MPO	Phase	Year
NJTPA	CD	2014
NJTPA	CD	2015

Route 280, WB Ramp over 1st & Orange Streets, Newark Subway & NJ Transit

DB#: 12318
UPC#: 123180

The structure is structurally deficient with Sufficiency rating of 52.7 and has deteriorated to the point that bridge deck needs to be rehabilitated/replaced

COUNTY: Essex
MUNICIPALITY: Newark City
MILEPOSTS: 13.28-13.48
STRUCTURE NO.: 0730192
LEGISLATIVE DISTRICT: 29 **SPONSOR:** NJDOT
ASSET MANAGEMENT CATEGORY: Bridge Assets: Deck Rehab and Replacement

MPO	Phase	Year
NJTPA	CD	2014
NJTPA	CD	2015

NJTPA
Transportation Improvement Program Fiscal Years 2012 - 2015

REVISION 3 AS OF 8/16/2012

Bridge Deck/Superstructure Replacement Program **DBNUM:** 03304

This program will provide funding for design and construction of deck preservation, deck replacement and superstructure replacement projects in various locations throughout the state. This is a statewide program which will address an approved priority listing of deficient bridge decks.

NJDOT CIS Category: ˙Bridge Assets

RCIS Category: Bridges

Sponsor: NJDOT

Air Quality Code: S19

FY 2012 - 2015 TIP Cost: (Million) $170.835

Unconstrained Information

PHASE	SOURCE	2012	2013	2014	2015	2016-2021
EC	BRIDGE	$5.000	$5.000	$5.000	$5.000	$30.000
EC	BRIDGE	$30.835	$40.000	$40.000	$40.000	$240.000
EC	I-MAINT	$.000				
		$35.835	$45.000	$45.000	$45.000	$270.000

REVISION 2 AS OF 7/24/2012

THIS PAGE HAS BEEN REPLACED BY REVISION 3

Bridge Deck/Superstructure Replacement Program **DBNUM:** 03304

This program will provide funding for design and construction of deck preservation, deck replacement and superstructure replacement projects in various locations throughout the state. This is a statewide program which will address an approved priority listing of deficient bridge decks.

NJDOT CIS Category: ˙Bridge Assets

RCIS Category: Bridges

Sponsor: NJDOT

Air Quality Code: S19

FY 2012 - 2015 TIP Cost: (Million) $170.835

Unconstrained Information

PHASE	SOURCE	2012	2013	2014	2015	2016-2021
EC	BRIDGE	$5.000	$5.000	$5.000	$5.000	$30.000
EC	BRIDGE	$27.835	$40.000	$40.000	$40.000	$240.000
EC	I-MAINT	$3.000				
		$35.835	$45.000	$45.000	$45.000	$270.000

NJTPA
Transportation Improvement Program Fiscal Years 2012 - 2015

REVISION 1 AS OF 4/5/2012

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Bridge Deck/Superstructure Replacement Program **DBNUM:** 03304

This program will provide funding for design and construction of deck preservation, deck replacement and superstructure replacement projects in various locations throughout the state. This is a statewide program which will address an approved priority listing of deficient bridge decks.

NJDOT CIS Category: ˙Bridge Assets

RCIS Category: Bridges

Sponsor: NJDOT

Air Quality Code: S19

FY 2012 - 2015 TIP Cost: (Million) $178.835

PHASE	SOURCE	2012	2013	2014	2015	Unconstrained Information 2016-2021
EC	BRIDGE	$5.000	$5.000	$5.000	$5.000	$30.000
EC	BRIDGE	$27.835	$40.000	$40.000	$40.000	$240.000
EC	I-MAINT	$11.000				
		$43.835	$45.000	$45.000	$45.000	$270.000

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Bridge Deck/Superstructure Replacement Program **DBNUM:** 03304

This program will provide funding for design and construction of deck preservation, deck replacement and superstructure replacement projects in various locations throughout the state. This is a statewide program which will address an approved priority listing of deficient bridge decks.

NJDOT CIS Category: ˙Bridge Assets

RCIS Category: Bridges

Sponsor: NJDOT

Air Quality Code: S19

FY 2012 - 2015 TIP Cost: (Million) $180.000

PHASE	SOURCE	2012	2013	2014	2015	Unconstrained Information 2016-2021
EC	BRIDGE	$5.000	$5.000	$5.000	$5.000	$30.000
EC	BRIDGE	$29.000	$40.000	$40.000	$40.000	$240.000
EC	I-MAINT	$11.000				
		$45.000	$45.000	$45.000	$45.000	$270.000

Appendix B

Bridge Re-Evaluation Report, 17th Cycle (2012 SI&A)

State of New Jersey

NEW JERSEY DEPARTMENT OF TRANSPORTATION
1035 PARKWAY AVENUE
P.O. Box 600
TRENTON, NEW JERSEY 08625-0600

BRIDGE RE-EVALUATION SURVEY REPORT

STRUCTURE NO. 0730-192
I-280 WESTBOUND OVER
I-280 RAMP A, N. 1ST STREET, ORANGE STREET AND
NJ TRANSIT (NEWARK LIGHT RAIL & MORRIS AND ESSEX LINES)
CITY OF NEWARK
ESSEX COUNTY

17TH CYCLE

AUGUST 28, 2012

NOTE: This Bridge Re-evaluation Report shall be filed immediately after the 16TH Cycle Inspection.

Prepared By

Consulting Engineers and Planners
2 Eves Drive, Suite 110
Marlton, New Jersey 08053

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2	Conclusions and Recommendations	17-2
3	Structural Inventory & Appraisal and Pontis Sheets	17-3
4	Load Rating Summary Sheet (LRSS)	17-8
5	Drawings and Photos	17-10
6	Field Notes	17-25

N.J.D.O.T. - STRUCTURAL EVALUATION
RE-EVALUATION BRIDGE SURVEY REPORT
CYCLE NO. 17

STRUCTURAL DATA:

Bridge No.:	0730-192	Year Built:	1972	Widened/Rehab:	N/A
Route No.:	I-280	Length:	1,052'	Width:	45.0'
Mile Point:	13.400	Date of This Evaluation:	08/28/2012		
Name:	I-280 Westbound over I-280 Ramp A, North 1st Street, Orange Street and NJ Transit (Newark Light Rail & Morris and Essex Lines)	By:	Buchart-Horn, Inc.		
		Date of Previous Evaluation:	09/14/2010		
		By:	Buchart-Horn, Inc.		
Structure Type:	Ten span, simply supported, composite, welded steel plate multiple girders with two FCM welded steel box girder caps at piers 6 and 7	Special Equipment Used:	Bucket Van & MPT (I-280 WB Right Lane & Ramp Lane Closures)		
		Date of In-Depth F.C.M. Inspection:	02/16/2006		
		By:	Abbington Associates, Inc.		

WORK DONE: Two (2) new guide rail sections installed (between posts 12 thru 16 and 20 thru 24) about 100' from the end of bridge (Photo No. 17-28).

OVERALL PHYSICAL CONDITION: (Item 60) Fair due to substructure condition

OVERALL CONDITION (ITEM 67): (Item 60) Fair due to substructure condition

Inspection Team Leader: William H. Munz, P.E. **Initials:** WHM

Certifying Engineer: Christopher D. Dwyer, P.E.

N.J. P.E. Number: 24GE03284600

I certify that this report is an accurate description of the subject structure, to the extent determinable by visual inspection and testing performed.

Signature: Christopher D. Dwyer

Date: 02-18-2013

ORIGINAL SIGNED AND SEALED

Structure No.:	0730-192	Route:	I-280 WB	Cycle No.:	17
Name:	I-280 WB over I-280 Ramp A, N. 1st St., Orange St. & NJ Transit (Newark Light Rail & Morris and Essex Lines)			Insp. Date:	08/28/2012

CONCLUSIONS & RECOMMENDATIONS:

The overall condition of the structure is fair due to the substructure condition.

The deck is in poor condition due to the 40%± contaminated deck concrete (increased from the approximately 30% contaminated deck noted in the 10th Cycle Bridge Survey Report).

The substructure is in fair condition due to minor section loss (up to 1/8") in the top plate (in the negative moment region) of the welded steel box girder caps (Photo Nos. 17-22 thru 17-25).

Since the previous inspection, the overall condition of the structure has generally remained the same.

The structure is fracture critical due to the non-redundant welded steel box girder pier caps at piers 6 and 7. Based on the in-depth fracture critical inspection report prepared by Abbington Associates, Inc. in February 2006, the fracture critical welded steel box girder pier caps are in fair condition due to minor section loss (up to 1/8") in the top plate (in the negative moment region) of the welded steel box girder caps.

The structure is classified as structurally deficient due to the poor condition of the deck. Therefore, we recommend the following remedial action:

Remove the Existing Bituminous Concrete Wearing Surface 1,052' x 40' x 1/9 @ $18/S.Y.	$ 84,160
Scarify the Concrete Deck 1,052' x 40' x 1/9 @ $35/S.Y.	$ 163,644
Concrete Deck Repair (Type B ~ 20 % of Deck Area) 1,052' x 40' x 0.20 @ $100/S.F.	$ 841,600
Concrete Deck Repair (Type C ~ 5 % of Deck Area) 1,052' x 40' x 0.05 @ $180/S.F.	$ 378,720
LMC Overlay 1,052' x 40' x 1/9 @ $100/S.Y.	$ 467,556
Approach Roadway Work (Lump Sum)	$ 100,000
Preliminary Engineering (15%)	$ 305,350
	$2,341,030
Say	**$2,341,000**

We recommend that the following Emergency / Priority repairs should be made to retard further deterioration, preserve the structural integrity of the bridge, improve safety and extend its useful life:

None

StructNum: 0730192 NJDOT SI and A Sheet

Name: I-280 WB / RAMP, 1ST & ORANGE STS, NJ TRANSIT **S.R.:** 53.6 **SD/FO-** 1 -Structurally Defici..

IDENTIFICATION

1 State:	34 New Jersey	8 Struc Num:	0730192
7 Facility Carried:	I-280 WESTBOUND	9 Location:	1.2 MI.EAST OF 280-GSP JN
5A Rte.(On/Under):	Route On Structure	5B Rte. Signing Prefix:	1- Interstate Hwy
5C Level of Service:	1 -Mainline	5D Rte. Number:	00280
5E Directional Suffix:	0- Not Applicable	% Responsibility :	NA
2 SHD District:	01- North	3 County Code:	Essex
4 Place Code:	Newark, Essex	11 Mile Post:	13.400 mi
6 Feature Intersected:	ORANGE,1ST ST.,RAMP, NJT		
16 Latitude:	40d 45' 05.88"	17 Longitude:	074d 11' 15 24"
98 Border Bridge Code:	-1 Unknown (P)		
99 Border Bridge Number:	NA		

STRUCTURE TYPE AND MATERIALS

46 Number of Approach Spans : 0 45 Number of Spans Main Unit: 10

43A/B Main Span Material/Design:

3 -Steel 02 -Stringer/Girder

107 Deck Type:	1- Conc..-Cast-in-Place
108A Wearing Surface:	6 -Bituminous
108B Membrane:	0- None
108C Deck Protection:	0- None

AGE AND SERVICE

27 Year Built:	1972	106 Year Reconstructed:	0
42A Type of Service On:	1 -Highway		
42B Type of Service Under:	4 -Highway-railroad		
28A Lanes on:	3	28B Lanes Under:	7
19 Detour Length:	1.0 mi		
29 ADT:	40,530	109 Truck ADT:	9 %
30 Year of ADT:	2012		

GEOMETRIC DATA

48 Length Max Span:	165.0 ft	49 Structure Length:	1,052.0 ft
50A Curb/Sdwlk Wdth L:	0.0 ft	50B Curb/Sidewalk Width R:	1.3 ft
Width Curb to Curb 51:	40.0 ft	52 Width Out to Out:	45.0 ft
32 Approach Roadway Width: (w/ shoulders)	40 ft	33 Median:	0 No median
Deck Area:	47,339.7 sq. ft		
34 Skew:	99.00 °	35 Structure Flared:	0 -No flare

53 Minimum Vertical Clearance Over Bridge: 9999

54A Minimum Vertical Underclearance Reference: H -Hwy beneath struct

54B Minimum Vertical Underclearance: 19.00 ft

55A Minimum Lateral Underclearance Reference R: H -Hwy beneath struct

55B Minimum Lateral Undrclearance R: 6.00 ft

56 Minimum Lateral Undrclearance L: 13.50 ft

INSPECTION

91 Frequency:	24 months	90 Inspection Date:	8/28/2012	Next Inspection:	08/28/2014
92A FC Frequency:	24 months	93A FC Inspection Date:	8/28/2012	Next FC Inspection:	8/28/2014
92B UW Frequency:	NA	93B UW Inspection Date:	NA	Next UW Inspection:	NA
92C SI Frequency:	NA	93C SI Date:	NA	Next SI:	NA
Element Frequency:	24 months	Element Inspection Date:	08/28/2012	Next Elem. Insp. Due:	08/28/2014

CLASSIFICATION

100 STRAHNET Highway:	1 - Interstate STRAHNET	101 Parallel Structure:	L -Left of || bridge
102 Direction of Traffic:	1 -1-way traffic	103 Temporary Structure:	-1
104 Highway System:	1 -On the NHS	112 NBIS Length:	Y - Long Enough
20 Toll Facility:	3 -On free road	26 Functional Class:	11- Urban Interstate
37 Historical Significance:	4 -Hist sign not determ.		
22 Owner:	01 NJDOT		
21 Custodian:	01 NJDOT		

CONDITION

58 Deck:	4 -Poor	59 Super:	7 -Good	60 Sub:	5 -Fair
62 Culvert:	N -Not applicable	61 Channel/Channel Protection:		N -Not applicable	

LOAD RATING AND POSTING

65 Inventory Rating Method:	1- LF Load Factor	63 Operating Rating Method:	1 -LF Load Factor
66 Inventory Rating:	HS46.0	64 Operating Rating:	HS75.9
31 Design Load:	6- MS18(HS20)+mod	70 Posting:	5 At/Above Legal Loads
41 Posting status:	A -Open, no restriction		

APPRAISAL

36A Bridge Rail:	0 -Substandard	36C Approach Rail:	0 -Substandard
36B Transition:	0 -Substandard	36D Approach Rail Ends:	1 -Meets Standards
67 Str. Evaluation:	5	68 Deck Geometry:	4 ~~3 -Intolerable - Correct~~
69 Underclearance, Vertical and Horizontal:	~~3 -Intolerable - Correct~~ 4		
71 Waterway Adequacy:	N -Not applicable	72 Approach Alignment:	8 -Equal Desirable Crit
113 Scour Critical:	N -Not Over Waterway		

PROPOSED IMPROVEMENTS

94 Bridge Cost:	$1,936,000	75 Type of Work:	36
95 Roadway Cost:	$100,000	76 Length of Improvment:	1053 ft
96 Total Cost:	$2,341,000	114 Future ADT:	48,640
97 Year of Cost Estimate:	2012	115 Year of Future ADT:	2032

NAVIGATION DATA

38 Navigation Control:	N	N -N/A-No waterway	
39 Vertical Clearance:	0.0 ft	40 Horizontal Clearance:	0.0 ft
111 Pier Protection:	-1	116 Lift Bridge Vertical Clearance:	

ELEMENT CONDITION STATE DATA

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	13/3	Unp Conc Deck/AC Ovl	(SF)	47,340	100 %	47,340	0 %	0	0 %	0	0 %	0	0 %	0
0	107/3	Paint Stl Opn Girder	(LF)	6,570	100 %	6,564	0 %	6	0 %	0	0 %	0	0 %	0
0	205/3	R/Conc Column	(EA)	16	0 %	0	94 %	15	6 %	1	0 %	0	0 %	0
0	215/3	R/Conc Abutment	(LF)	138	0 %	0	100 %	138	0 %	0	0 %	0	0 %	0
0	231/3	Paint Stl Cap	(LF)	94	100 %	94	0 %	0	0 %	0	0 %	0	0 %	0
0	302/3	Compressn Joint Seal	(LF)	600	26 %	157	74 %	443	0 %	0	0 %	0	0 %	0

StructNum: 0730192

NJDOT SI and A Sheet

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	321/3	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
0	331/3	Conc Bridge Railing	(LF)	2,104	51 %	1,065	49 %	1,039	0 %	0	0 %	0	0 %	0
0	359/3	Soffit Smart Flag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
0	363/3	Section Loss SmFlag	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
0	374/3	Rocker Bearing	(EA)	60	98 %	59	2 %	1	0 %	0	0 %	0	0 %	0
0	375/3	Pinned Bearing	(EA)	60	100 %	60	0 %	0	0 %	0	0 %	0	0 %	0
0	503/3	Curbs/Walks - Conc	(LF)	1,052	90 %	952	10 %	100	0 %	0	0 %	0	0 %	0
0	505/3	Slope Protection	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0

NJDOT BRIDGE FIELDS

(V1.2)

Brkey: 0730192 Inspkey

GENERAL

(A) Town: Newark City
(AA) Route: 280
(AD) Admin: -1
(AE) Alt Agency: -1 _

STRUCTURE AND APPURTENANCES

(AC) Non-Inv Feature: -1
(AF) Alt Struct #: -1
(AG) Rail Type: 08 Solid Wall (Concrete)
(AH) Rail Height:: 2.67
(AJ) Slope Protection: 03 Concrete Slab
(AK) Abutment: 10 Combinatio
(AL) Pier: 10 Combination
(AM) Depth of Fill: 0.00
(AP) Fender System: -1
(AT) Special Material 1: _
(AT) Special Material 2: _
(AU) Add Struct: 1 4
2 C
(AV) Widen Stru: Material Design
1st Widen _ -1
2nd Widen _ -1

FUNDING AND COST

(BL) Discretionary: _
(BM) Fed Job #: BR NBIS757
(BN) State Job #: 2205341
(BO) St Maint Cost: -1.00
(BP) Brdg Demo N

SCOUR EVALUATION

(FA) FHWA Category: -1
(FB) Stage 1 Date: 1/1/1901
(FC) Stage 1 Consultant: -1
(FD) Prioritization: _
(FE) Sufficiency: -1.0
(FF)Date Stage II 1/1/1901
(FG) Stage II Consultant: -1
(FH) Crit. Element:
-1

COUNTER MEASURES

(FI) Recommended:
-1

(FJ) Cost: -1.00
(FK) Installed: 1 _ 2 _ 3 _
(FL) Monitoring Reqd: _

PROJECT PROGRAMMING

(HB) Bridge List ID: ST0B_
(HC) Consultant B34
(HD) 2-Cy Insp Contr: N
(HE) Proceed Date: I 1/1/1901
II 1/1/1901
(HF) State Proj Mgr: MKP

BRIDGE NOISE BARRIER (HA)

Material 1: _
2: _
Height 1: _
2: _

PAINTING

(GB) Environment: 02
(GR) Last Painting: 12/2007
(GA) Painting Req: Y

FENCING

(AQ) Chain Link: . ft
(FN) Warranted: N

SIGN STRUCTURES

(GS) Overhead: 0
(GT) Cantilever: 2
(GU) Fascia Mounted: 0

POSTINGS

(CG) Load Type: _
(CG) Tons -1
(AI) Speed: -1

TEMPORARY STRUCTURES

(GV) Bridge: N
(GW) Shoring: N
(GX) Reports: N
(GY) Measures: N
(GZ) Cond Desc:
-1

LOAD RATINGS

Type		Inv		Opr
H	(BQ)	0	(CA)	0
HS	(BR)	46	(CB)	76
3	(BS)	44	(CC)	73
3S2	(BT)	54	(CD)	91
3-3	(BU)	61	(CE)	99
M	(BV)	_	(CF)	_
Misc	(CH1)	L		
	(CH2)	-1.1023113		

MISCELLANEOUS

(CQ) Bridge List: _
(BK) Overstress %: -1
(FV) Route Milepost: 013.40
(FM) Incident Reprtd: _
(AO) Utilities: 1: _
2: _
3: _
4: _
(CR) Off-Route Bridge: N
(BB) Orphan Bridge: N
(AN) Plan Available: Y
(FX) Fed Error Uncorr N
(FW) Estimated ADT N

RAILROAD

(BC) USRA Code: 6801
(BD 1) Rail On/Under: 0
(BD2)RRs intersected: 5
(BE) Rail Milepost: -0.62

StructNum: 0730192

NJDOT SI and A Sheet

NJDOT INSPECTION FIELDS (V1.2)

GENERAL

(CI) Cycle Number:	17
(CJ) Insp Type:	S
(CK) Inspection Crew:	J
(CM) Consultant:	B34
(CO) Prev Consultant:	B34
(CP) Federal Report:	_

INSPECTION DATES

(AW) Mech/Electrical:		1/1/1901
(AX) Deck:		1/1/1901
(AY) Special Testing:		10/1/2001
(GC) Paint:		8/28/2012
(AR) Equipment:	1:	M
	2:	E
	3:	_
(AS) Testing:	1:	_
	2:	_
	3:	_

MISCELLANEOUS

(B) Deletion Code:	N
(BA) Apr Rdwy Cond:	8

FATIGUE DETAIL (AZ)

Location1:	06
	31
Location 2:	20
	31
Location 3:	03
	01

IN-DEPTH PIN-HANGER

(FR) Consultant:	A47
(FS)	

Two welded steel box girder pier caps at piers #6 & #7 from west.

(FT) Combo:	N
(FQ) FCM/Pin-Hngr Insp Date:	2/16/2006

REMARKS

(BF) Deck:	1:	2
	2:	N
	3:	U
	4:	V
	5:	Z
(BG) Super:	1:	Z
	2:	_
	3:	_
(BH) Sub:	1:	Z
	2:	O
	3:	C
(BI) Channel		_
(BJ) Culvert		_

FENCING

(FO) Pedestrian Traffic:	N	
(FP) Improvement Cost:	$ 0	Thousands

PAINTING

(GD) Fascia Beam:	08
(GE) Fascia B. Flange:	08
(GF) Interior Beam:	08
(GH) Interior B. Flange:	08
(GI) Beam Ends:	08
(GJ) Connections:	08
(GK) Bracings:	08
(GL) Bearings:	07
(GM) Substructure:	06
(GN) Above Deck Super:	-1
(GO) Railings/Fence:	-1
(GP) Remarks 1:	

(GQ) Remarks 2:
-1

ROADWAY DATA

Bridge Id: 0730192
SRI 00000280__ (V1.2)

ROADWAY IDENTIFICATION

NBI Roadway?:	1		
Roadway Name:	I - 280 WESTBOUND		
Item 5A:	1		
Item 5B:	1		
Item 5C:	1		
Item 5D:	00280	Item 5E	0

HWY NETWORKS AND SERVICE CLASSIFICATION

11 Milepost:	13.400 mi		
12 Base Hwy Network:	1		
20 Toll Facility:	3		
13A LRS Inventory Route	00000280__	Subroute No.:	00
26 Functional Class:	11	102 TraffDirection:	1

ALTERNATE CLASSIFICATION

100 Strahnet Hwy:	1	Transit Rt:	0
104 NHS System:	1	Emergency	0
105 Fed. Lands Hwy:	0		
110 Truck Hwy Net:	1		
School Bus:	0		

TRAFFIC AND ACCIDENTS

28 Lanes :	3
Num Median:	0
Road Speed:	50 mph
ADTclass:	04
29 ADTtotal:	40530
30 Year of ADT:	2012
114 Future ADT:	48640
115 Year of Future ADT:	2032
109 Truck ADTT % :	9
19 Bypass Length:	1.00 mi
Detour Speed:	45 mph

CLEARANCES

10 Vertical Clearance:	99.90 ft
47 Invent Route Horiz Clear:	40.00 ft
(DJ) Min Vert Undrclr:	19.00 ft

WIDTHS

32 Appr Rdwy Width:	40 ft
51 Brdg Rdwy With Curb-Curb:	40.0 ft

StructNum: 0730192 NJDOT SI and A Sheet

ROADWAY DATA

Bridge Id: 0730192
SRI 00000280__Y101310 (V1.2)

ROADWAY IDENTIFICATION

NBI Roadway?:	1
Roadway Name:	I-280 RAMP A
Item 5A:	A
Item 5B:	1
Item 5C:	7
Item 5D:	00280 Item 5E 0

HWY NETWORKS AND SERVICE CLASSIFICATION

11 Milepost:	13.400 mi		
12 Base Hwy Network:	0		
20 Toll Facility:	3		
13A LRS Inventory Route	-1	Subroute No.:	-1
26 Functional Class:	11	102 TraffDirection:	1

ALTERNATE CLASSIFICATION

100 Strahnet Hwy:	0	Transit Rt:	0
104 NHS System:	1	Emergency	0
105 Fed. Lands Hwy:	0		
110 Truck Hwy Net:	0		
School Bus:	0		

TRAFFIC AND ACCIDENTS

28 Lanes :	1
Num Median:	0
Road Speed:	35 mph
ADTclass:	03
29 ADTtotal:	6450
30 Year of ADT:	2012
114 Future ADT:	-1
115 Year of Future ADT:	-1
109 Truck ADTT % :	9
19 Bypass Length:	1.00 mi
Detour Speed:	15 mph

CLEARANCES

10 Vertical Clearance:	24.33 ft
47 Invent Route Horiz Clear:	24.40 ft
(DJ) Min Vert Undrclr:	19.00 ft

WIDTHS

32 Appr Rdwy Width:	-3 ft
51 Brdg Rdwy With Curb-Curb:	-3.3 ft

Bridge Id: 0730192
SRI 07141895__ (V1.2)

ROADWAY IDENTIFICATION

NBI Roadway?:	1
Roadway Name:	NORTH FIRST STREET
Item 5A:	B
Item 5B:	5
Item 5C:	1
Item 5D:	00000 Item 5E 0

HWY NETWORKS AND SERVICE CLASSIFICATION

11 Milepost:	3.590 mi		
12 Base Hwy Network:	0		
20 Toll Facility:	3		
13A LRS Inventory Route	-1	Subroute No.:	-1
26 Functional Class:	16	102 TraffDirection:	2

ALTERNATE CLASSIFICATION

100 Strahnet Hwy:	0	Transit Rt:	0
104 NHS System:	0	Emergency	0
105 Fed. Lands Hwy:	0		
110 Truck Hwy Net:	0		
School Bus:	0		

TRAFFIC AND ACCIDENTS

28 Lanes :	3
Num Median:	0
Road Speed:	25 mph
ADTclass:	03
29 ADTtotal:	6450
30 Year of ADT:	2012
114 Future ADT:	-1
115 Year of Future ADT:	-1
109 Truck ADTT % :	4
19 Bypass Length:	1.00 mi
Detour Speed:	25 mph

CLEARANCES

10 Vertical Clearance:	25.00 ft
47 Invent Route Horiz Clear:	40.00 ft
(DJ) Min Vert Undrclr:	26.25 ft

WIDTHS

32 Appr Rdwy Width:	-3 ft
51 Brdg Rdwy With Curb-Curb:	-3.3 ft

StructNum: 0730192

NJDOT SI and A Sheet

ROADWAY DATA

Bridge Id: 0730192
SRI 07141922__

(V1.2)

ROADWAY IDENTIFICATION

NBI Roadway?:	1		
Roadway Name:	ORANGE STREET		
Item 5A:	C		
Item 5B:	5		
Item 5C:	1		
Item 5D:	00000	Item 5E	0

HWY NETWORKS AND SERVICE CLASSIFICATION

11 Milepost:	0.620 mi		
12 Base Hwy Network:	0		
20 Toll Facility:	3		
13A LRS Inventory Route	-1	Subroute No.:	-1
26 Functional Class:	16	102 TraffDirection:	2

ALTERNATE CLASSIFICATION

100 Strahnet Hwy:	0	Transit Rt:	0
104 NHS System:	0	Emergency	0
105 Fed. Lands Hwy:	0		
110 Truck Hwy Net:	0		
School Bus:	0		

TRAFFIC AND ACCIDENTS

28 Lanes :	3
Num Median:	0
Road Speed:	25 mph
ADTclass:	03
29 ADTtotal:	6450
30 Year of ADT:	2012
114 Future ADT:	-1
115 Year of Future ADT:	-1
109 Truck ADTT % :	4
19 Bypass Length:	1.00 mi
Detour Speed:	25 mph

CLEARANCES

10 Vertical Clearance:	19.83 ft
47 Invent Route Horiz Clear:	40.00 ft
(DJ) Min Vert Undrclr:	19.83 ft

WIDTHS

32 Appr Rdwy Width:	-3 ft
51 Brdg Rdwy With Curb-Curb:	-3.3 ft

Structure No.:	0730-192	Route:	I-280 WB	Cycle No.:	17
Name:	I-280 WB over I-280 Ramp A, N. 1st St., Orange St. & NJ Transit (Newark Light Rail & Morris and Essex Lines)			Insp. Date:	08/28/2012

LOAD RATING SUMMARY SHEET (LRSS)

(Form NJ-BI-101 Created 1/14/2010)

Project Information:

Group: ST0B Agreement No.: 2010BI776F Contract ID: 10-50808 Agree/Mod No.: 01

Rating Information:

Method: LRFR: No LFR: Yes ASR: No Other (Specify):

Rating Date: 10/20/1994 Computer Software Used: Penn DOT BAR 7 Version: 7.4

Load Testing: No Cycle Rating Performed: 8 Design Load: HS20+M

Structure Information:

Plans Available? Yes Contract Designation: Unknown

Overlay? Yes Considered in Rating? Yes Type/Thickness: N/A

Section Losses? No Considered in Rating? N/A Item 59: 7

For LRFR Use Only:

Surface Roughness Factor: Condition Factor: System Factor:

ADTT (one direction): Resistance Factor: FCM: Yes

Load Rating Engineer (LRE):

Name: Unknown Firm: Unknown Initial: Unknown

Load Rating Reviewer (LRR) certification as per the NBIS Title 23 CFR Section 650.309(c):

Name: Unknown N.J. P.E. No.: Unknown

Firm: Unknown

I certify that this rating is an accurate representation of the subject structure, considering all deterioration and/or changes to loading conditions, to the extent determinable by research and visual inspection and testing performed. I am charged with the overall responsibility for bridge capacity evaluation for the above mentioned structure.

Sign and Seal if Rating Performed in this Cycle

N/A
Sign

N/A
Date

LOAD RATING SUMMARY SHEET (LRSS) (*cont.*)

Rating Comments:

PERCENTAGE (%) SECTION LOSS: None

The Load Factor ratings, computed in accordance with the FHWA directive dated November 1993 and AASHTO Manual for Condition Evaluation of Bridges, 1994, as modified by Division 4 of the New Jersey Department of Transportation Design Manual, Bridges and Structures, are as follows:

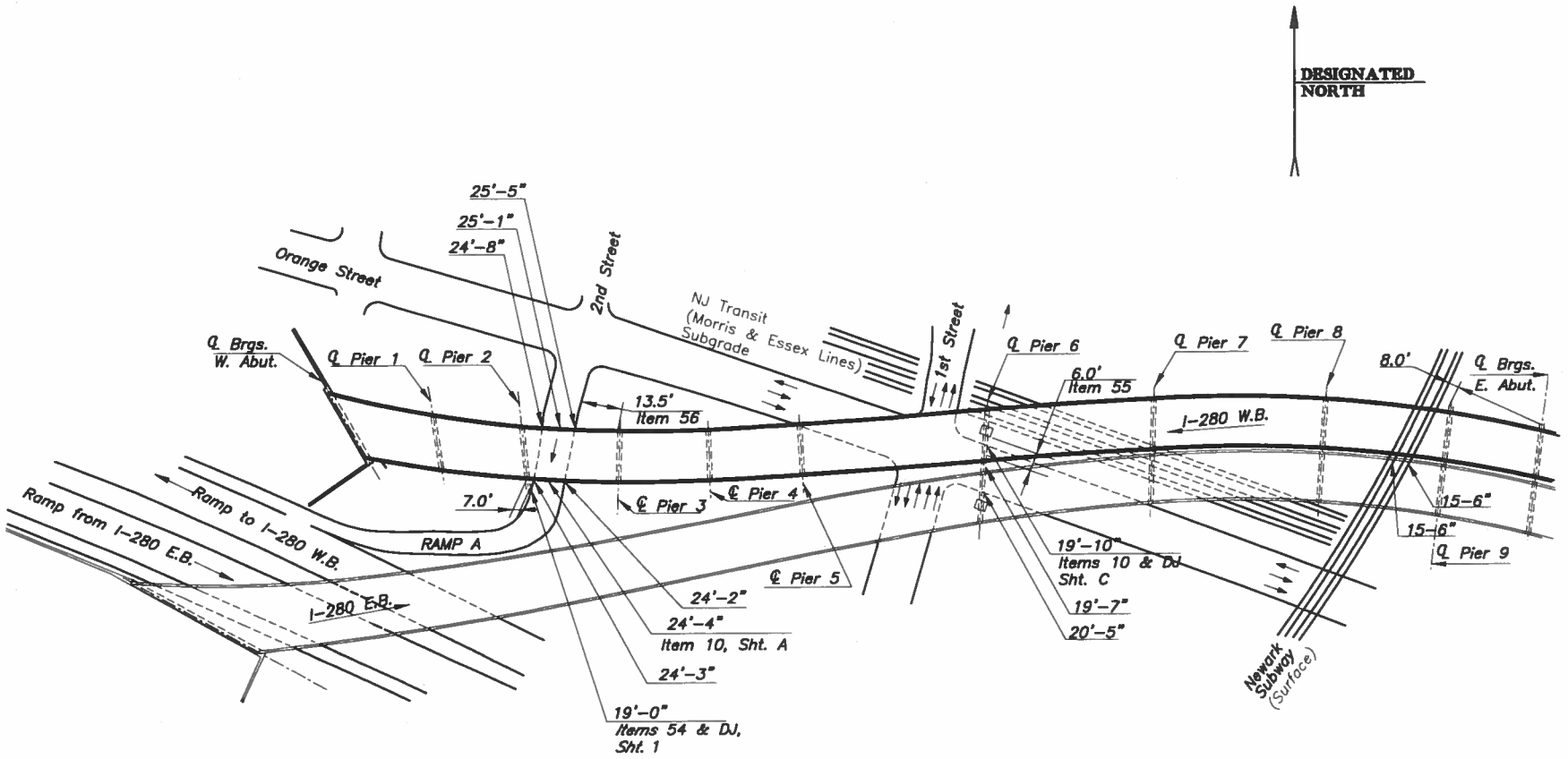
		Allowable Stresses (psi)		
Material	**Compressive Strength f'c**	**Yield**	**Inventory**	**Operating**
Concrete	3,000	--	1,200	1,650
Reinforcing Steel	--	40,000	20,000	28,000
Structural Steel	--	36,000	20,000	27,000

			Rating (Tons) Load Factor	
Member	**Truck Type (Tons)**		**Inventory**	**Operating**
Interior Girder (S-40)	Type HS-20	(36T)	46	76
	Type 3	(25T)	44	73
	Type 3S2	(40T)	54	91
	Type 3-3	(40T)	61	102
FCM Steel Box Beam Pier Cap #6 (From 7th Cycle)	Type HS-20	(36T)	78*	99*+

Fatigue Rating (From 1st Cycle FCM Report)

Box Girder Pier Cap 6 (Category C)	Type HS-20	(36T)	128*
Box Girder Pier Cap 7 (Category C)	Type HS-20	(36T)	106*

* Working stress ratings.



PLAN AND CLEARANCES
N.T.S.

NEW JERSEY DEPARTMENT OF TRANSPORTATION
STRUCTURAL EVALUATION

STRUCTURE NO. 0730-192
I-280 WB OVER I-280 RAMP A, N. 1ST ST., ORANGE ST. AND NJ TRANSIT (NEWARK LIGHT RAIL & MORRIS AND ESSEX LINES)
CITY OF NEWARK ESSEX COUNTY

BUCHART HORN, INC.

CYCLE No. 17
DATE: 8/28/12



Photo No: 17-01

Location:	North elevation (spans 1, 2 and 3 from west), looking southeast.
Description:	General view. Note: I-280 EB Structure No. 0730-191 is in the rear.



Photo No: 17-02

Location:	North elevation (spans 3 thru 6), looking southeast.
Description:	General view. Note: Span 3 is over Ramp A (right side) and span 6 is over Orange Street on the left.



Photo No: 17-03

Location:	North elevation (spans 7and 8), looking southeast.
Description:	General view (hidden by tress).



Photo No: 17-04

Location:	Roadway, looking east.
Description:	General view.



Photo No: 17-05

Location:	East approach roadway, looking west.
Description:	General view. Note: MPT (I-280 right lane closure and partial ramp lane closure) used during the inspection.



Photo No: 17-06

Location:	Superstructure (span 2, from west), looking east.
Description:	General view of welded steel plate girders superstructure.



Photo No: 17-07

Location:	Superstructure (span 6), looking east.
Description:	General view of welded steel plate girders superstructure. Note: I-280 EB Structure No. 0730-191 is on the right side.



Photo No: 17-08

Location:	Orange Street (beneath spans 6 and 7), looking southeast.
Description:	General view. Note: Welded steel box cross-girder pier 6 cap (w/ cantilevered spans) and pier 7 cap are common, supporting I-280 WB, Structure No. 0730-192 (on left side) and I-280 EB, Structure No. 0730-191 (on right side).



Photo No: 17-09

Location:	Deck span 1 (from west), looking south.
Description:	Note: Bituminous concrete patched area (w/ two large potholes) in right lane near the west abutment (rubberized material).



Photo No: 17-10

Location:	Deck span 1, south concrete deck overhang, looking north.
Description:	Note: Several fine transverse cracks w/ efflorescence (at mid-span).



Photo No: 17-11

Location:	West abutment deck joint, looking south.
Description:	Note: Compression deck joint seal is loose along the spalled concrete header areas.



Photo No: 17-12

Location:	Pier 2 deck joint, looking south.
Description:	Note: Minor to moderate edge spalling of concrete headers w/ loose compression deck joint seal.



Photo No: 17-13

Location:	Scupper at span 4 northwest corner, looking northwest.
Description:	Note: Fully clogged drainage scupper.



Photo No: 17-14

Location:	East abutment deck joint, looking south.
Description:	Note: Minor edge spalling of concrete headers w/ loose compression deck joint seal.



Photo No: 17-15

Location:	North bridge parapet (near pier 9), looking northwest.
Description:	Note: Broken junction box cover plate w/ exposed wires.



Photo No: 17-16

Location:	Girder 3 bearing at west abutment, looking southwest.
Description:	Note: Missing anchor bolt nuts.



Photo No: 17-17

Location:	West fascia girder (at east abutment), looking south.
Description:	Note: Girder web w/ a large hole near the end w/ section loss.



Photo No: 17-18

Location:	Girder 1 bearing (at east abutment), looking northeast.
Description:	Note: Contracted rocker bearing (Typical all bearings at abutment).



Photo No: 17-19

Location:	East abutment breastwall, looking south.
Description:	Note: Several incipient spalls in breastwall w/ rust stains.



Photo No: 17-20

Location:	East abutment concrete slope protection, looking southwest.
Description:	Note: Undermining of up to 3” w/ erosion.



Photo No: 17-21

Location:	Northeast wingwall, looking east.
Description:	Note: Exposed wingwall footing about 40’ from end of east abutment.



Photo No: 17-22

Location:	Welded steel box cross-girder pier 6 cap (w/ cantilevered spans), looking northwest.
Description:	General view of the welded steel box pier 6 cap (fracture critical member). Note: I-280 EB Structure No. 0730-191 is on the left side.



Photo No: 17-23

Location:	Welded steel box pier 6 cap bottom flange plate, looking northeast.
Description:	Note: Minor pitting in bottom flange of the pier cap.



Photo No: 17-24

Location:	Welded steel box cross-girder pier 7 cap, looking northeast.
Description:	General view of the welded steel box pier 6 cap (fracture critical member). Note: I-280 EB Structure No. 0730-191 is on the right side.



Photo No: 17-25

Location:	Welded steel box pier 7 cap top flange plate, looking northeast.
Description:	Note: Minor pitting in top flange of the pier cap. Also note light to moderate rust of bearings.



Photo No: 17-26

Location:	Pier 5 north column, looking northwest.
Description:	Note: North concrete column w/ incipient spall at east side (top half).



Photo No: 17-27

Location:	Pier 5 concrete cap, looking southwest.
Description:	Note: Several incipient spalls at underside of concrete pier cap.



Photo No: 17-28

Location:	Northwest approach guide rail, looking northwest.
Description:	Work Done: Two (2) new guide rail sections (25 L.F. each) installed (between posts 12 thru 16 and 20 thru 24) about 100’ from the end of bridge.

Structure No.:	0730-192	Route:	I-280 WB	Cycle No.:	17
Name:	I-280 WB over I-280 Ramp A, N. 1st St., Orange St. & NJ Transit (Newark Light Rail & Morris and Essex Lines)			Insp. Date:	08/28/2012

NEW JERSEY DEPARTMENT OF TRANSPORTATION
STRUCTURAL EVALUATION
BRIDGE EVALUATION CHECK LIST

(FIELD NOTES)

Inspectors: Robert Palmay
Crew Chief: William Munz, P.E.
Temperature: 85ºF
Name: I-280 WB over I-280 Ramp A, N. 1st Street, Orange Street, and NJ Transit (Newark Light Rail & Morris and Essex Lines)
Weather: Cloudy
Special Equipment Used: Bucket Van & MPT (I-280 WB Right Lane & Ramp Lane Closures)

RATINGS:

GPS COORDINATES		
Southwest Corner		
N 40°	45′ 05.88″	Lat.
W 74°	11′ 15.24″	Long.

N Not applicable
9 Excellent Condition
8 Very Good Condition – no problems noted.
7 Good Condition – some minor problems.
6 Satisfactory Condition – some minor deterioration of structural elements.
5 Fair Condition – minor section loss of primary structural elements.
4 Poor Condition – advance section loss of primary structural elements.
3 Serious Condition – seriously deteriorated primary structural elements.
2 Critical Condition – facility should be closed until repairs are made.
1 Imminent Failure Condition – facility closed. Study of repairs is feasible.
0 Failed Condition – facility is closed and beyond repair.

GENERAL

Type of Bridge: Ten span, simply supported, composite, welded steel plate multiple girders with two FCM steel box cross - girder caps at piers 6 and 7

Year Built: 1972
Year of Widening / Major Repairs: N/A

No. of Lanes: On 3 (2 through + 1 ramp) Under 7 (1 @ Ramp A; 3 @ Orange St.; 3 @ N. 1st St.)

Vertical Clearances: Over Deck: Unlimited

Minimum Under: 19'-0" under the pier 2 cap at right edge of I-280 Ramp A.

Maximum Under (Item 10): 24'-4" under the south fascia girder at center line of I-280 Ramp A.

Horizontal Underclearance: Total Horizontal Clearance: 40.0'

Right 6.0' from assumed right edge of WB lane of Orange St. to north column of pier 6

Left 13.5' from the left shoulder stripe of I-280 Ramp A to north column of pier 3

Overall Physical Condition of Structure: Fair due to substructure
(Item 60)

DECK

SI&A Item 58 Condition Rating: **4**

SPAN # 1 (West)

RATING	COMPONENT	REMARKS
6	Wearing Surface (Bituminous Concrete)	Bituminous concrete patched area (w/ two large potholes) in right lane near the west abutment; 3" x 2" pothole at right /center lane at one-third point from pier 1; two deteriorated depressed areas (4 S.F.) adjacent to 5.5' x 3.75' patched area rubberized material (Photo No. 17-09).
6	Underside of Deck (SIP Metal Forms / Concrete)	Concrete at deck overhangs w/ several fine transverse cracks w/ efflorescence (Photo No. 17-10).
N	Median	None
7	Curbs (Concrete)	At north side only. No significant defects.
7	Safetywalks (Concrete)	At north side only. No significant defects.
7	Parapets (Concrete)	South: NJ barrier. North: Rectangular parapet. No significant defects.
N	Railings / Fencing	None
6	Deck Joints / Filler Material (Compression Joint Seal)	Compression joint seal sections in left lane at west abutment and pier 1 deck joint are loose along spalled concrete header areas (Photo Nos. 17-11 and 17-12).
N	Drains and Scuppers	None
N	Light Stands	None
7	Utilities	2 SHD boxes in north safetywalk. No significant defects.
6	Headers (Concrete)	Concrete repaired/patched areas in the headers in left lane at west abutment and pier 1 deck joints. West abutment and pier 1: Minor edge spalling w/ several fine to wide cracks across (Photo Nos. 17-11 and 17-12).
N	Others	N/A

Additional Remarks: The deck is assumed 40%± contaminated (estimated increase from the 30% contaminated deck noted in the 10th Cycle Bridge Survey Report). Due to this condition, **Item 58 rating is "4".**

DECK

SI&A Item 58 Condition Rating: **4**

SPAN # 2

RATING	COMPONENT	REMARKS
8	Wearing Surface (Bituminous Concrete)	No significant defects.
6	Underside of Deck (SIP Metal Forms / Concrete)	Concrete at deck overhangs w/ several fine transverse cracks w/ efflorescence (Typical Photo No. 17-10). Bay 2: Spot of heavy rust (1 S.F.) near pier 1.
N	Median	None
7	Curbs (Concrete)	At north side only. No significant defects.
7	Safetywalks (Concrete)	At north side only. No significant defects.
7	Parapets (Concrete)	South: NJ barrier. North: Rectangular parapet. At north side only. No significant defects.
N	Railings / Fencing	None
6	Deck Joints / Filler Material (Compression Joint Seal)	Compression joint seal section in left lane at pier 2 deck joint; loose along spalled concrete header areas; minor tear in joint seal (Photo No. 17-12).
6	Drains and Scuppers	North: Clogged inlet at northwest corner seal (Typical Photo No. 17-13).
8	Light Stands	At north parapet; steel bracket mounted to the parapet at northwest corner. No significant defects.
8	Utilities	No significant defects.
6	Headers (Concrete)	Concrete repaired/patched areas in the headers in left lane at pier 2 deck joint; minor edge spalling w/ several fine to wide cracks across (Photo No. 17-12).

Additional Remarks: The deck is assumed 40%± contaminated (estimated increase from the 30% contaminated deck noted in the 10th Cycle Bridge Survey Report). Due to this condition, **Item 58 rating is "4".**

Structure No.:	0730-192	Route:	I-280 WB	Cycle No.:	17
Name:	I-280 WB over I-280 Ramp A, N. 1st St., Orange St. & NJ Transit (Newark Light Rail & Morris and Essex Lines)			Insp. Date:	08/28/2012

DECK

SI&A Item 58 Condition Rating: **4**

SPAN # 3

RATING	COMPONENT	REMARKS
8	Wearing Surface (Bituminous Concrete)	Bituminous concrete overlay, rubberized patched area in right lane at midspan. No significant defects.
7	Underside of Deck (SIP Metal Forms / Concrete)	Concrete at deck overhangs w/ several fine transverse cracks w/ efflorescence (Typical Photo No. 17-10). No significant defects.
N	Median	None
7	Curbs (Concrete)	At north side only. No significant defects.
7	Safetywalks (Concrete)	At north side only. No significant defects.
7	Parapets (Concrete)	South: NJ barrier. North: Rectangular parapet. No significant defects.
N	Railings / Fencing	None
6	Deck Joints / Filler Material (Compression Joint Seal)	Compression joint seal section in left lane at pier 3 deck joint; minor tear in joint seals; loose along spalled concrete header areas (Typical Photo No. 17-12).
N	Drains and Scuppers	None
8	Light Stands	At north parapet; steel bracket mounted to the parapet northeast corner.
8	Utilities	
6	Headers (Concrete)	Pier 3 concrete repaired/patched areas in the headers in left lane at pier 3 deck joint; minor to moderate edge spalling w/ several fine to wide cracks across (Typical Photo No. 17-10).

Additional Remarks: The deck is assumed 40%± contaminated (estimated increase from the 30% contaminated deck noted in the 10th Cycle Bridge Survey Report). Due to this condition, **Item 58 rating is "4".**

Structure No.:	0730-192	Route:	I-280 WB	Cycle No.:	17
Name:	I-280 WB over I-280 Ramp A, N. 1st St., Orange St. & NJ Transit (Newark Light Rail & Morris and Essex Lines)			Insp. Date:	08/28/2012

DECK

SI&A Item 58 Condition Rating: **4**

SPAN # 4

RATING	COMPONENT	REMARKS
8	Wearing Surface (Bituminous Concrete)	No significant defects.
7	Underside of Deck (SIP Metal Forms / Concrete)	Concrete at deck overhangs w/ several fine transverse cracks w/ efflorescence (Typical Photo No. 17-10). No significant defects.
N	Median	None
7	Curbs (Concrete)	At north side only. No significant defects.
7	Safetywalks (Concrete)	At north side only. No significant defects.
7	Parapets (Concrete)	South: NJ barrier. North: Rectangular parapet. No significant defects.
N	Railings / Fencing	None
6	Deck Joints / Filler Material (Compression Joint Seal)	Compression joint seal section in left lane at pier 4 deck joint; loose along spalled header areas; two locations of torn section (2 L.F.) at right lane (Typical Photo No. 17-12).
5	Drains and Scuppers	North: Clogged inlet at near pier 3 (Photo No. 17-13).
N	Light Stands	None
N	Utilities	None
6	Others / Headers (Concrete)	Pier 4: Concrete repaired/patched areas in the headers in left lane at pier 4 deck joint; minor edge spalling w/ several fine to wide cracks across (Typical Photo No. 17-12).

Additional Remarks: The deck is assumed 40%± contaminated (estimated increase from the 30% contaminated deck noted in the 10th Cycle Bridge Survey Report). Due to this condition, **Item 58 rating is "4".**

DECK

SI&A Item 58 Condition Rating: **4**

SPAN # 5

RATING	COMPONENT	REMARKS
8	Wearing Surface (Bituminous Concrete)	No significant defects.
7	Underside of Deck (SIP Metal Forms / Concrete)	Concrete at deck overhangs w/ several fine transverse cracks w/ efflorescence (Typical Photo No. 17-10). No significant defects.
N	Median	None
7	Curbs (Concrete)	At north side only. No significant defects.
7	Safetywalks (Concrete)	At north side only. No significant defects.
7	Parapets (Concrete)	South: NJ barrier. North: Rectangular parapet. No significant defects.
N	Railings / Fencing	None
6	Deck Joints / Filler Material (Compression Joint Seal)	Compression joint seal section in left lane at pier 5 deck joint; loose at spalled header areas(Typical Photo No. 17-12).
N	Drains and Scuppers	None
8	Light Stands	At north parapet; steel bracket mounted to the parapet.
8	Utilities	
6	Others / Headers (Concrete)	Pier 5: Concrete repaired/patched areas in the headers in left lane at pier 5 deck joint; minor edge spalling w/ several fine to wide cracks across (Typical Photo No. 17-12).

Additional Remarks: The deck is assumed 40%± contaminated (estimated increase from the 30% contaminated deck noted in the 10th Cycle Bridge Survey Report). Due to this condition, **Item 58 rating is "4".**

DECK

SI&A Item 58 Condition Rating: **4**

SPAN # 6

RATING	COMPONENT	REMARKS
8	Wearing Surface (Bituminous Concrete)	No significant defects.
7	Underside of Deck (SIP Metal Forms / Concrete)	Concrete at deck overhangs w/ several fine transverse cracks w/ efflorescence (Typical Photo No. 17-10). No significant defects.
N	Median	None
7	Curbs (Concrete)	At north side only. No significant defects.
7	Safetywalks (Concrete)	At north side only. No significant defects.
7	Parapets (Concrete)	South: NJ barrier. North: Rectangular parapet. No significant defects.
N	Railings / Fencing	None
7	Deck Joints / Filler Material (Compression Joint Seal)	Compression joint seal with steel armoring for full length in pier 6 deck joint. No significant defects.
5	Drains and Scuppers	Fully clogged inlet at north gutter (mid-span, Typical Photo No. 17-13).
7	Light Stands	At north parapet; steel bracket mounted to the parapet. No significant defects.
8	Utilities	No significant defects.
N	Others	N/A

Additional Remarks: The deck is assumed 40%± contaminated (estimated increase from the 30% contaminated deck noted in the 10th Cycle Bridge Survey Report). Due to this condition, **Item 58 rating is "4".**

DECK

SI&A Item 58 Condition Rating: **4**

SPAN # 7

RATING	COMPONENT	REMARKS
8	Wearing Surface (Bituminous Concrete)	No significant defects.
7	Underside of Deck (SIP Metal Forms / Concrete)	Concrete at deck overhangs w/ several fine transverse cracks w/ efflorescence (Typical Photo No. 17-10). No significant defects.
N	Median	None
7	Curbs (Concrete)	At north side only. No significant defects.
7	Safetywalks (Concrete)	At north side only. No significant defects.
7	Parapets (Concrete)	South: NJ barrier. North: Rectangular parapet. No significant defects.
N	Railings / Fencing	
7	Deck Joints / Filler Material (Compression Joint Seal)	Torn at right shoulder; loose along spalled concrete header areas (Typical Photo No. 17-12).
7	Drains and Scuppers	No significant defects.
8	Light Stands	At north parapet; steel bracket mounted to the parapet at northeast and northwest corners. No significant defects.
7	Utilities	No significant defects.
7	Headers (Concrete)	Concrete repaired/patched areas in the headers in left lane at pier 7 deck Joint; minor edge spalling w/ several fine to wide cracks across (Typical Photo No. 17-12). No significant defects.
N	Others	N/A

Additional Remarks: The deck is assumed 40%± contaminated (estimated increase from the 30% contaminated deck noted in the 10th Cycle Bridge Survey Report). Due to this condition, **Item 58 rating is "4".**

DECK

SI&A Item 58 Condition Rating: **4**

SPAN # 8

RATING	COMPONENT	REMARKS
8	Wearing Surface (Bituminous Concrete)	No significant defects.
7	Underside of Deck (SIP Metal Forms / Concrete)	Concrete at deck overhangs w/ several fine transverse cracks w/ efflorescence (Typical Photo No. 17-10). No significant defects.
N	Median	None
7	Curbs (Concrete)	At north side only. No significant defects.
7	Safetywalks (Concrete)	At north side only. No significant defects.
7	Parapets (Concrete)	South: NJ barrier. North: Rectangular parapet. No significant defects.
N	Railings / Fencing	None
7	Deck Joints / Filler Material (Compression Joint Seal)	Compression joint seal section in left shoulder at pier 8 deck joint; loose along spalled concrete header areas(Typical Photo No. 17-12). No significant defects.
6	Drains and Scuppers	South: East end drain clogged.
8	Light Stands	At north parapet; steel bracket mounted to the parapet northeast corner.
8	Utilities	
7	Headers (Concrete)	Concrete repaired/patched areas in the headers in left shoulder at pier 8 deck Joint; minor edge spalling w/ several fine to wide cracks across (Typical Photo No. 17-12). No significant defects.

Additional Remarks: The deck is assumed 40%± contaminated (estimated increase from the 30% contaminated deck noted in the 10th Cycle Bridge Survey Report). Due to this condition, **Item 58 rating is "4".**

DECK

SI&A Item 58 Condition Rating: **4**

SPAN # 9

RATING	COMPONENT	REMARKS
8	Wearing Surface (Bituminous Concrete)	No significant defects.
7	Underside of Deck (SIP Metal Forms / Concrete)	Concrete at deck overhangs w/ several fine transverse cracks w/ efflorescence (Typical Photo No. 17-10). No significant defects.
N	Median	None
7	Curbs (Concrete)	At north side only. No significant defects.
7	Safetywalks (Concrete)	At north side only. No significant defects.
7	Parapets (Concrete)	South: NJ barrier. North: Rectangular parapet. No significant defects.
7	Railings / Fencing	Concrete parapet extension over electrified surface subway. No significant defects.
6	Deck Joints / Filler Material (Compression Joint Seal)	Pier 9: Loose along spalled concrete header areas (Typical Photo No. 17-12).
N	Longitudinal Joint in Median	N/A (paved over).
N	Drains and Scuppers	None
N	Light Stands	None
8	Utilities	
6	Headers (Concrete)	At pier 9 deck joint - minor edge spalling w/ several fine to wide cracks across (Typical Photo No. 17-12).

Additional Remarks: The deck is assumed 40%± contaminated (estimated increase from the 30% contaminated deck noted in the 10th Cycle Bridge Survey Report). Due to this condition, **Item 58 rating is "4".**

DECK

SI&A Item 58 Condition Rating: **4**

SPAN # 10 (East)

RATING	COMPONENT	REMARKS
6	Wearing Surface (Bituminous Concrete)	No significant defects.
7	Underside of Deck (SIP Metal Forms / Concrete)	Concrete at deck overhangs w/ several fine transverse cracks w/ efflorescence (Typical Photo No. 17-10). No significant defects.
N	Median	None
6	Curbs (Concrete)	At north side only. Large shallow spalls (8 S.F.).
7	Safetywalks (Concrete)	At north side only. No significant defects.
6	Parapets (Concrete)	South: NJ barrier- several small to large spall (10 S.F.). North: Rectangular parapet.
N	Railings / Fencing	None
6	Deck Joints / Filler Material (Compression Joint Seal)	East abutment: Loose along spalled concrete header areas (Photo No. 17-14).
N	Drains and Scuppers	None
8	Light Stands	At north parapet at northeast and northwest corners; steel bracket mounted to the parapet. No significant defects.
5	Utilities	Electrical junction box in parapet wall near pier 9: cover plate is broken with exposed electrical cables (Photo No. 17-15).
6	Headers (Concrete)	Concrete repaired/patched area in the east abutment header between the 2 right lanes; east abutment: Minor edge spalling w/ several fine to wide cracks across (Photo No. 17-14).

Additional Remarks: The deck is assumed 40%± contaminated (estimated increase from the 30% contaminated deck noted in the 10th Cycle Bridge Survey Report). Due to this condition, **Item 58 rating is "4".**

APPROACHES

SI&A Item BA Rating: **8**

SI&A Item 72 Rating: **8**

APPROACH West

RATING	COMPONENT	REMARKS
8	Approach Slab / Pavement (Bituminous Concrete)	No significant defects.
8	Approach Shoulder (Bituminous Concrete)	No significant defects.
	Approach Roadway Vertical and Horizontal Alignment	Horizontal: Tangent. Vertical: Moderate downgrade slope away from the bridge. Sight distance is adequate.
6	Guide Rail Condition (W-Beam)	Work Done: Two (2) new guide rail section (25 L.F.) installed northwest corner between posts 12 thru 16 and 20 thru 24 about 100' from end of bridge (Photo No. 17-28). Northwest: Guide rail connection with bridge parapet is loose (w/ 2 loose and 1bent bolts).
N	Sidewalks	None
6	Curbs (Concrete)	At north side only. Settlement up to 2 ¼" at 5' from end of bridge.
6	Utilities	Minor debris in drainage inlet at north side.
7	Approach Roadway Embankment	At northwest corner only. No significant defects.
7	NJ Barrier (Concrete)	At south side only. No significant defects.

Additional Remarks:

APPROACHES

SI&A Item BA Rating: **8**

SI&A Item 72 Rating: **8**

APPROACH East

RATING	COMPONENT	REMARKS
8	Approach Slab / Pavement (Bituminous Concrete)	No significant defects.
8	Approach Shoulder (Bituminous Concrete)	No significant defects.
	Approach Roadway Vertical and Horizontal Alignment	Horizontal: Straight. Vertical: Steep downgrade slope away from the bridge. Sight distance is adequate.
7	Guide Rail Condition (W-Beam)	No significant defects.
6	Safetywalks (Concrete)	At north side only. Settlement up to 1 ¾" at 15' from end of bridge.
7	Curbs (Concrete)	At north side only. No significant defects.
N	Utilities	None
7	Approach Roadway Embankment	At northeast corner only. No significant defects.
7	NJ Barrier (Concrete)	At south side only. No significant defects.

Additional Remarks:

Structure No.:	0730-192	Route:	I-280 WB	Cycle No.:	17
Name:	I-280 WB over I-280 Ramp A, N. 1st St., Orange St. & NJ Transit (Newark Light Rail & Morris and Essex Lines)			Insp. Date:	08/28/2012

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: **7**

SPAN # 1 (West)

RATING	COMPONENT	REMARKS
7	Girders (Steel, 6 Nos.) (Numbered South to North)	No significant defects. A few spots of paint peeling.
7	Diaphragms / Cross Frames (Steel)	No significant defects.
7	Bearings (Steel)	No significant defects. West abutment: 6 pinned bearings - missing nuts in anchor bolts of bearings 1 and 2; missing nut in 2 anchor bolt of bearing 3; loose nuts in anchor bolts of bearing 5; missing nut in 1 anchor bolt of bearing 6 (Typical Photo No. 17-16). Pier 1: 6 rocker bearings; slightly expanded. Some spots of light rust and paint peeling.
	Deflection and Vibration	Noticeable vibration with truck loads.
N	Others	N/A

Additional Remarks: Painted 12/2007.

FATIGUE DETAILS

Estimated percentage of Large trucks in ADT = 9 %

Category	Detail Description and Location
E	Detail 14 – Connection angle tack welded at bracing connection in tension zone.
E	Detail 18 – Longitudinal stiffeners welded to the webs in the tension zone (both fascia girders with butt welds).

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: **7**

SPAN # 2

RATING	COMPONENT	REMARKS
7	Girders (Steel, 6 Nos.) (Numbered South to North)	No significant defects. Spots of light rust.
7	Diaphragms / Cross Frames (Steel)	No significant defects. Bay 3, 1st interior diaphragm (from west) exhibits collision damage (kinked) w/ paint peeled off in horizontal angle at north end.
7	Bearings (Steel)	Pier 1: 6 pinned bearings. Pier 2: 6 rocker bearings; slightly expanded. No significant defects. Some light rust and pitting.
	Deflection and Vibration	Noticeable vibration with truck loads.
N	Others	N/A

Additional Remarks: Painted 12/2007.

FATIGUE DETAILS

Estimated percentage of Large trucks in ADT = 9 %

Category	Detail Description and Location
E	Detail 10 – Lateral gusset connections welded to girder bottom flanges between G1-G2, G2-G3, G5-G6, & G6-G7.
E	Detail 14 – Connection angle tack welded at bracing connection in tension zone.
E	Detail 18 – Longitudinal stiffeners welded to the webs in the tension zone (both fascia girders with butt welds).

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: **7**

SPAN # 3

RATING	COMPONENT	REMARKS
7	Girders (Steel, 6 Nos.) (Numbered South to North)	No significant defects. Girder 4 exhibits a large area of paint peeling in bottom flange and web.
7	Diaphragms / Cross Frames (Steel)	No significant defects. Bay 3 @ pier 3 - minor spot painting in bottom horizontal angle.
7	Bearings (Steel)	Pier 2: 6 pinned bearings. Pier 3: 6 rocker bearings. No significant defects. Some light rust and pitting.
	Deflection and Vibration	Noticeable vibration with truck loads.
N	Others	N/A

Additional Remarks: Painted 12/2007.

FATIGUE DETAILS

Estimated percentage of Large trucks in ADT = 9 %

Category	Detail Description and Location
E	Detail 18 – Longitudinal stiffeners welded to the webs in the tension zone (both fascia girders with butt welds).

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: **7**

SPAN # 4

RATING	COMPONENT	REMARKS
7	Girders (Steel, 6 Nos.) (Numbered South to North)	No significant defects. Spots of light rust.
7	Diaphragms / Cross Frames (Steel)	No significant defects. Bay 3 @ pier 3 - minor spot painting in bottom horizontal angle.
7	Bearings (Steel)	Pier 3: 6 pinned bearings. Pier 4: 6 rocker bearings. No significant defects. Some light rust and pitting.
	Deflection and Vibration	Noticeable vibration with truck loads.
N	Others	N/A

Additional Remarks: Painted 12/2007.

FATIGUE DETAILS

Estimated percentage of Large trucks in ADT = 9 %

Category	Detail Description and Location
E	Detail 18 – Longitudinal stiffeners welded to the webs in the tension zone (both fascia girders with butt welds).

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: **7**

SPAN # 5

RATING	COMPONENT	REMARKS
7	Girders (Steel, 6 Nos.) (Numbered South to North)	No significant defects.
7	Diaphragms / Cross Frames (Steel)	No significant defects.
7	Bearings (Steel)	Pier 4: 6 pinned bearings. Pier 5: 6 rocker bearings; slightly contracted.
	Deflection and Vibration	Noticeable vibration with truck loads.
N	Others	N/A

Additional Remarks: Painted 12/2007.

FATIGUE DETAILS

Estimated percentage of Large trucks in ADT = 9 %

Category	Detail Description and Location
E	Detail 18 – Longitudinal stiffeners welded to the webs in the tension zone (both fascia girders with butt welds).

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: **7**

SPAN # 6

RATING	COMPONENT	REMARKS
7	Girders (Steel, 6 Nos.) (Numbered South to North)	No significant defects. Spots of light rust.
7	Diaphragms / Cross Frames (Steel)	No significant defects. Spots of light rust end diaphragms.
7	Bearings (Steel)	No significant defects. Pier 5: 6 pinned bearings. Pier 6 (steel pier cap): 6 rocker bearings; slightly expanded (Typical).
	Deflection and Vibration	Noticeable vibration with truck loads.
N	Others	N/A

Additional Remarks:

FATIGUE DETAILS

Estimated percentage of Large trucks in ADT = 9 %

Category	Detail Description and Location
E	Detail 10 – Lateral gusset connections welded to girder bottom flanges between G1-G2, G2-G3, G4-G5, & G5-G6.
E	Detail 14 – Connection angle tack welded at bracing connection in tension zone.
E	Detail 16 – Tack welds at backing bars on inside of welded box girder pier cap at pier 6 per in depth fracture critical report.
E	Detail 18 – Longitudinal stiffeners welded to the webs in the tension zone (both fascia girders with butt welds).

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: **7**

SPAN # 7

RATING	COMPONENT	REMARKS
7	Girders (Steel, 6 Nos.) (Numbered South to North)	No significant defects. Spots of light rust.
7	Diaphragms / Cross Frames (Steel)	No significant defects. Spots of light rust end diaphragms.
7	Bearings (Steel)	Pier 6 (steel pier cap): 6 pinned bearings. Pier 7 (steel pier cap): 6 rocker bearings; slightly contracted. No significant defects. Spots of light rust.
	Deflection and Vibration	Noticeable vibration with truck loads.
N	Others	N/A

Additional Remarks:

FATIGUE DETAILS

Estimated percentage of Large trucks in ADT = 9 %

Category	Detail Description and Location
E	Detail 10 – Lateral gusset connections welded to girder bottom flanges between G1-G2, G2-G3, G4-G5, & G5-G6.
E	Detail 14 – Connection angle tack welded at bracing connection in tension zone.
E	Detail 16 – Tack welds at backing bars on inside of welded box girder pier cap at pier 6 per in depth fracture critical report.
E	Detail 18 – Longitudinal stiffeners welded to the webs in the tension zone (both fascia girders with butt welds).

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: **7**

SPAN # 8

RATING	COMPONENT	REMARKS
7	Girders (Steel, 6 Nos.) (Numbered South to North)	No significant defects. Light rust bottom flange at both ends (Typical).
7	Diaphragms / Cross Frames (Steel)	No significant defects. Spots of light rust end diaphragms.
7	Bearings (Steel)	Pier 7 (steel pier cap): 6 pinned bearings. Pier 8: 6 rocker bearings – girders 1, 2 and 4 contracted and girders 4 and expanded. No significant defects. Light rust.
	Deflection and Vibration	Noticeable vibration with truck loads.
N	Others	N/A

Additional Remarks:

FATIGUE DETAILS

Estimated percentage of Large trucks in ADT = 9 %

Category	Detail Description and Location
E	Detail 10 – Lateral gusset connections welded to girder bottom flanges between G1-G2, G2-G3, G4-G5, & G5-G6.
E	Detail 14 – Connection angle tack welded at bracing connection in tension zone.
E	Detail 16 – Tack welds at backing bars on inside of welded box girder pier cap at pier 6 per in depth fracture critical report.
E	Detail 18 – Longitudinal stiffeners welded to the webs in the tension zone (both fascia girders with butt welds).

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: **7**

SPAN # 9

RATING	COMPONENT	REMARKS
7	Girders (Steel, 6 Nos.) (Numbered South to North)	No significant defects. Some light rust.
7	Diaphragms / Cross Frames (Steel)	No significant defects. Some light rust.
7	Bearings (Steel)	Pier 8: 6 pinned bearings. Pier 9: 6 rocker bearings. No significant defects. Some light rust.
	Deflection and Vibration	Noticeable vibration with truck loads.
N	Others	N/A

Additional Remarks:

FATIGUE DETAILS

Estimated percentage of Large trucks in ADT = 9 %

Category	Detail Description and Location
E	Detail 18 – Longitudinal stiffeners welded to the webs in the tension zone (both fascia girders with butt welds).

Structure No.:	0730-192	Route:	I-280 WB	Cycle No.:	17
Name:	I-280 WB over I-280 Ramp A, N. 1st St., Orange St. & NJ Transit (Newark Light Rail & Morris and Essex Lines)			Insp. Date:	08/28/2012

SUPERSTRUCTURE

SI&A Item 59 Condition Rating: **7**

SPAN # 10 (East)

RATING	COMPONENT	REMARKS
7	Girders (Steel, 6 Nos.) (Numbered South to North)	No significant defects. West fascia girder 6 exhibits a hole in web east end w/ section loss (Photo No. 17-17).
7	Cross Frames / Diaphragms (Steel)	No significant defects. Some light rust.
7	Bearings (Steel)	Pier 9: 6 pinned bearings. East abutment: 6 rocker bearings; missing anchor bolt in bearing 1; all rocker contracted (Photo No. 17-18).
	Deflection and Vibration	Noticeable vibration with truck loads.
N	Others	N/A

Additional Remarks:

FATIGUE DETAILS

Estimated percentage of Large trucks in ADT = 9 %

Category	Detail Description and Location
E	Detail 18 – Longitudinal stiffeners welded to the webs in the tension zone (both fascia girders with butt welds).

Structure No.:	0730-192	Route:	I-280 WB	Cycle No.:	17
Name:	I-280 WB over I-280 Ramp A, N. 1st St., Orange St. & NJ Transit (Newark Light Rail & Morris and Essex Lines)			Insp. Date:	08/28/2012

PAINT INSPECTION

*Environment: 2

Date of Last Painting: 12/2007

1. Rural or Industrial, Mild exposure
2. Industrial, Severe Exposure
3A. Marine, Mild Exposure
3B. Marine, Severe Exposure
*Ref. NJDOT Design Manual Sec. 1.24.19

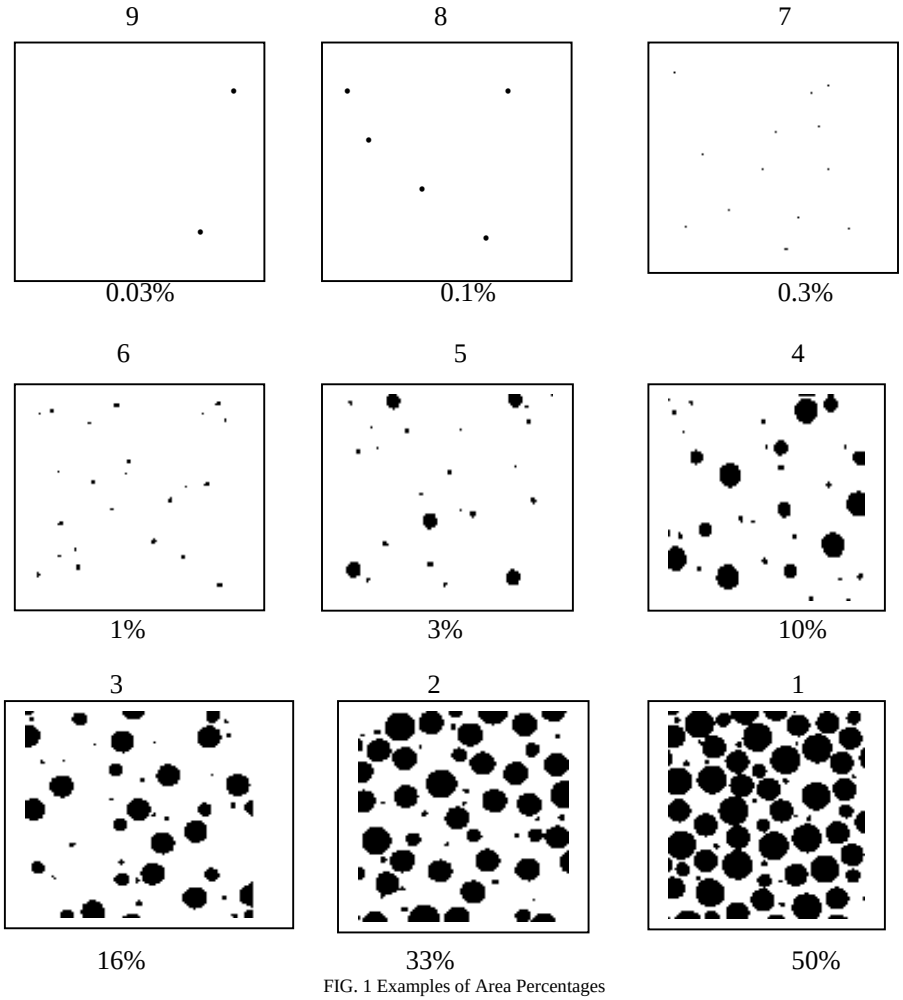


FIG. 1 Examples of Area Percentages

Note: Blistered Paint areas are counted as rust

10 = 0% Rust
0 = 100% Rust

Note: Use the closest rating to the actual field condition based on the average for the bridge. Indicate any areas of severe rusting in remarks.

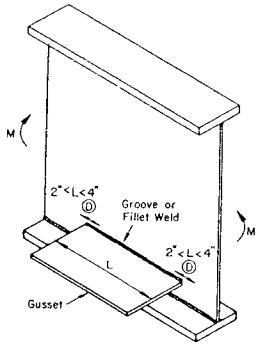
INSPECTION RATINGS (0 THROUGH 10 OR N/A)

Fascia Beam:	8	Fascia Bottom Flange:	8	Beams Ends:	8
Interior Beam:	8	Interior Bottom Flange:	8	Connections:	8
Bracing:	8	Substructure:	6	Railings/Fence:	N/A
Bearings:	7	Above Deck Superstructure	N/A		

Remarks 1:

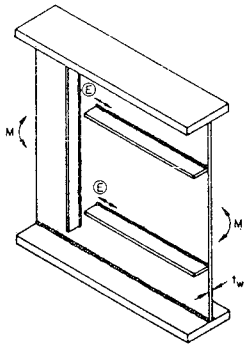
Remarks 2:

TYPICAL FATIGUE DETAILS



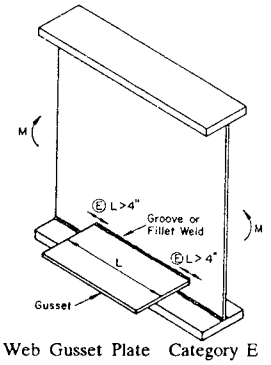
Short Wed Gusset Plate L < 4 in. Category D

Detail 1



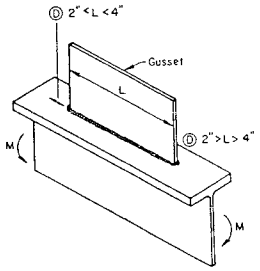
Termination of Longitudinal Stiffeners Category E

Detail 2



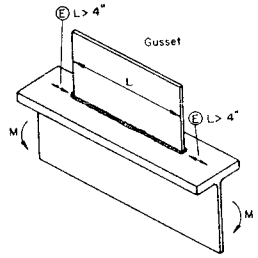
Web Gusset Plate Category E

Detail 3



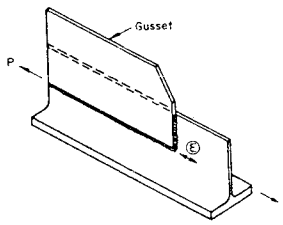
Short Flange Gusset Plate L ≤ 4 in. Category D

Detail 4



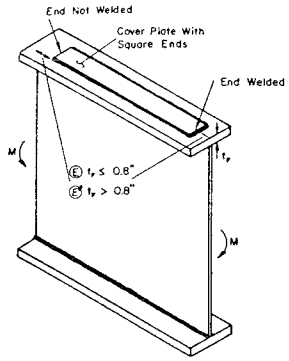
Flange Gusset Plate Category E

Detail 5



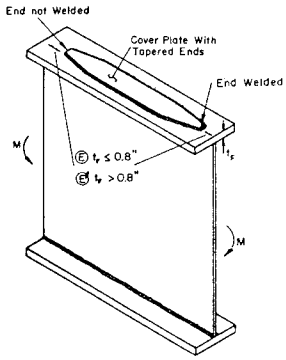
Gusset Welded to Bracing Member Category E

Detail 6



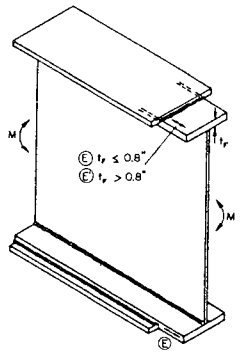
Square Ended Cover Plates Narrower than the Girder Flange Category E or E'

Detail 7



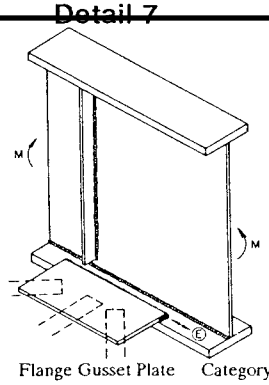
Cover Plates Narrower than the Girder Flange with Tapered Ends Category E or E'

Detail 8



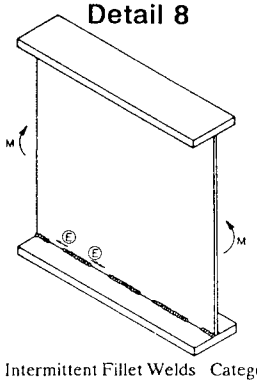
Cover Plates Wider than the Girder Flange with End Welds Category E or E'

Detail 9



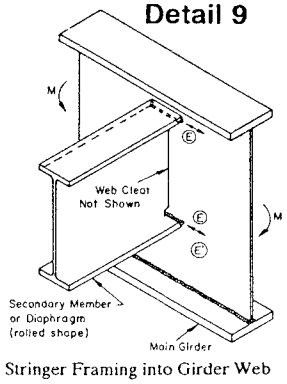
Flange Gusset Plate Category E

Detail 10



Intermittent Fillet Welds Category E

Detail 11



Stringer Framing into Girder Web Category E or E'

Detail 12

TYPICAL FATIGUE DETAILS

13. Field Weld Repairs - Proper welding procedures may not have been used; testing of weld by non-destructive methods was usually not done, therefore, the possibility of large flaws exists. Check carefully on the main structural members (stringers, floorbeams, girders).

14. Tack Welds - Check carefully on riveted members constructed in 1940's and 1950's as these welds were sometimes used to hold the plates together during riveting.

15. Plug Welds - Check at bolted connections on welded structures. These welds may have been used to fill-in incorrectly drilled holes (see sketch).

16. Backing Bars - These welds are possibly not full penetration. Check carefully on box girders if accessible and at butt (groove) welds made in the field.

17. Details with 2 or 3 Intersecting Welds (Slot Welds) - Incomplete penetration of the second and third welds is possible.

18. Butt (Groove) Welds on Horizontal Web Stiffeners - NDT of the weld was not always required on the stiffener in the tension zone. If the weld is not good, this will be an "E" detail or worse which can exist in a high stress area (This would be the same as or worse than typical detail 3).

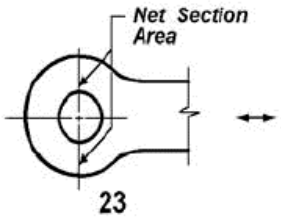
19. Detail Without Proper Welding Clearance - Poor welding can result if proper clearance for the welding rod is not maintained by the designer (such as a horizontal web stiffener placed too near the bottom flange of a girder; fillet weld at bottom of stiffener is difficult due to a lack of clearance for the welding rod).

20. Coped or Blocked Flanges - Check carefully when these details exist on main structural members (stringers and floorbeams). Coped flanges are a typical detail on movable spans.

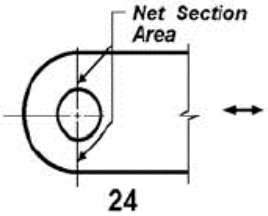
21. Distortion (Bending) at Small Gaps - For typical details which exhibit damage due to this, see "Inspecting Steel Bridges for Fatigue Damage" (see sketches).

From AASHTO LRFD Specifications Table 6.6.1.2.3-1 Detail Categories for Load-Induced Fatigue:

23, 24 Eyebar or Pin Plates Base metal at the net section of eyebar head, or pin plate (Category E):



23



24

SUBSTRUCTURE

SI&A Item 60 Condition Rating: **5**

ABUTMENT West

RATING	COMPONENT	REMARKS
7	Breastwall (Concrete)	No significant defects.
7	Backwall (Concrete)	No significant defects.
7	Bridge Seat (Concrete)	No significant defects.
7	Wingwalls / Retaining Walls (Concrete)	No significant defects.
N	Embankment / Slope Protection	None
N	Others / Footings	N/A

Additional Remarks: Electrical conduit and three junction boxes at top of breastwall.

ABUTMENT East

RATING	COMPONENT	REMARKS
6	Breastwall (Concrete)	2 spalls/incipient spalls (6 S.F. total) under girder 1 (Photo No. 17-19).
7	Backwall (Concrete)	No significant defects.
7	Bridge Seat (Concrete)	No significant defects.
7	Wingwalls / Retaining Walls (Concrete)	At northeast corner only. Note: Abutment is shared with structure 0730-191 at south end. No significant defects.
6	Slope Protection (Concrete)	Wide diagonal crack (4 L.F.) in top panel under bay 3; minor undermining (up to 3" deep) at top/north end due to moderate embankment erosion (20 C.Y.) (Photo No. 17-20).
6	Others / Footings	Northeast Wingwall: Exposed top of footing (13 L.F. x 1'-10" wide) 40'± from the abutment (Photo No. 17-21).

Additional Remarks:

SUBSTRUCTURE

SI&A Item 60 Condition Rating: **5**

PIER 1 (West)

RATING	COMPONENT	REMARKS
7	Columns (Concrete, 2 Nos.)	No significant defects.
6	Pier Cap (Concrete)	Spall and incipient spall (3 S.F. total) at south end/west side (Typical Photo No. 17-27); incipient spall (4 S.F.) at bottom north side (north overhang).
7	Bridge Seat (Concrete)	No significant defects.
N	Footings	N/A (not exposed)

Additional Remarks:

PIER 2

RATING	COMPONENT	REMARKS
7	Columns (Concrete, 2 Nos.)	No significant defects.
7	Pier Cap (Concrete)	No significant defects.
7	Bridge Seat (Concrete)	No significant defects.
N	Footings	N/A (not exposed)

Additional Remarks:

SUBSTRUCTURE

SI&A Item 60 Condition Rating: **5**

PIER 3

RATING	COMPONENT	REMARKS
7	Columns (Concrete, 2 Nos.)	No significant defects.
7	Pier Cap (Concrete)	No significant defects.
7	Bridge Seat (Concrete)	No significant defects.
N	Footings	N/A (not exposed)

Additional Remarks:

PIER 4

RATING	COMPONENT	REMARKS
7	Columns (Concrete, 2 Nos.)	No significant defects.
7	Pier Cap (Concrete)	No significant defects.
7	Bridge Seat (Concrete)	No significant defects.
N	Footings	N/A (not exposed)

Additional Remarks:

SUBSTRUCTURE

SI&A Item 60 Condition Rating: **5**

PIER 5

RATING	COMPONENT	REMARKS
6	Columns (Concrete, 2 Nos.)	North column – Incipient spall (4 S.F.) at east side (top half) (Photo No. 17-26).
6	Pier Cap (Concrete)	Incipient spalls - Under girder 3 (2 S.F.) east face and bay 3; underside (3 S.F.) under bay 4 and at west face (3 S.F.) under bay 4 (Photo No. 17-27).
7	Bridge Seat (Concrete)	No significant defects. West Face: Incipient spall (4 S.F.) under bay 4. Underside exhibits incipient spall (6 S.F.) under bay 4; east side under girder 3 (4 S.F.) and bay (2 S.F.).
N	Footings	N/A (not exposed)

Additional Remarks:

PIER 6

RATING	COMPONENT	REMARKS
7	Columns (Concrete, 1 No.) (Numbered North)	Note: South column is for Structure No. 0730-191 (EB structure). No significant defects.
5	Pier Cap (Steel Box Girder)	Welded steel box cross-girder pier 6 cap (w/ cantilevered spans - fracture critical member) is common, supporting I-280 EB, Structure No. 0730-191 and I-280 WB, Structure No. 0730-192, respectively. Minor pitting along bottom flange adjacent to column; minor pitting in east web mostly lower (Photo Nos. 17-22 and 17-23). From 3rd Cycle FCM Report - Minor section loss (1/16" to 1/8") on top plate in negative moment regions.
7	Bridge Seat (Concrete)	No significant defects.
N	Footings	N/A (not exposed)

Additional Remarks:

Structure No.:	0730-192	Route:	I-280 WB	Cycle No.:	17
Name:	I-280 WB over I-280 Ramp A, N. 1st St., Orange St. & NJ Transit (Newark Light Rail & Morris and Essex Lines)			Insp. Date:	08/28/2012

SUBSTRUCTURE

SI&A Item 60 Condition Rating: **5**

PIER 7

RATING	COMPONENT	REMARKS
7	Columns (Concrete, 1 No.) (Numbered North)	Note: South column is for Structure No. 0730-191 (EB structure). No significant defects.
5	Pier Cap (Steel)	Welded steel box cross-girder pier 7 cap (fracture critical member) is common, supporting I-280 EB, Structure No. 0730-191 and I-280 WB, Structure No. 0730-192, respectively. Light rusting of top and bottom flanges w/ some section loss bottom flange east side (Photo Nos. 17-24 and 17-25). From 3rd Cycle FCM Report - Minor section loss (1/16" to 1/8") on top plate in negative moment regions.
7	Bridge Seat (Concrete)	No significant defects.
N	Footings	N/A (not exposed)

Additional Remarks:

PIER 8

RATING	COMPONENT	REMARKS
7	Columns (Concrete, 2 Nos.)	No significant defects.
6	Pier Cap (Concrete)	Random fine cracks w/ efflorescence / rust stains (30 L.F.); shallow spalls w/ exposed rebars north end west side (2 S.F.) (Typical Photo No. 17-27).
6	Bridge Seat (Concrete)	Medium to wide cracks in top (10 L.F.).
N	Footings	N/A (not exposed)

Additional Remarks:

SUBSTRUCTURE

SI&A Item 60 Condition Rating: **5**

PIER 9 (East)

RATING	COMPONENT	REMARKS
6	Columns (Concrete, 2 Nos.)	South Column: Large incipient spall (4 S.F.) at bottom/west side (Typical Photo No. 17-26).
6	Pier Cap (Concrete)	West Face: Incipient spall at bottom under bay 1(2 S.F.), at top under bay 2 (4 S.F.) and at bottom under bay 4 (3 S.F.). East Face: Incipient spall at near south end (1 S.F.) (Typical Photo No. 17-27). Fine random cracks w/ efflorescence (10 L.F.) both faces.
7	Bridge Seat (Concrete)	No significant defects.
N	Footings	N/A (not exposed)

Additional Remarks:

HIGHWAY SAFETY

Coding of SI&A Item 36: **0001**
1: Good
0: Not Good
N: Not Applicable

RATING		COMPONENT	REMARKS
0		Bridge Railing	North: 3'-2" high concrete rectangular parapet on top of a 9" curb (4'-0" overall height). South: 2'-8" high concrete NJ barrier. Due to substandard bridge railing height and structural capacity.
0	0	Transition to Bridge Railing	Leading Traffic End: Northeast – Concrete parapet continues on north wingwall for >100', then steel thrie beam transition (2 rail elements) with steel I-beam spacer blocks and missing rub rail; first 3 posts are spaced 1.6'; next 4 posts are spaced 3.3; then 6.3'± posts spacing. Southeast – Continuous concrete NJ barrier. Trailing Traffic End: Northwest - Steel W-beam transition (1 rail element) with rub rail and steel I-beam spacer blocks; first post is spaced 4.2'; then 6.3'± posts spacing. Southwest - Continuous concrete NJ barrier. Due to substandard steel spacer blocks at northeast corner.
	1	Curb / Sidewalk Terminations	Safetywalk/curb – Shielded and tapered at northwest and northeast corners. Continuous concrete NJ Barrier at southwest and southeast corners.
0		Approach Guide Rails	Southwest and Southeast: Continuous concrete NJ barrier. Northwest and Northeast: Steel W-beam guide rail with I-beam spacers blocks, 6.3'± posts spacing. Due to substandard steel spacer blocks at northeast corner.
1		Approach Guide Rail End Terminals	Northeast and Northwest: Continuous guide rail. Southwest and Southeast: Continuous concrete NJ barrier.

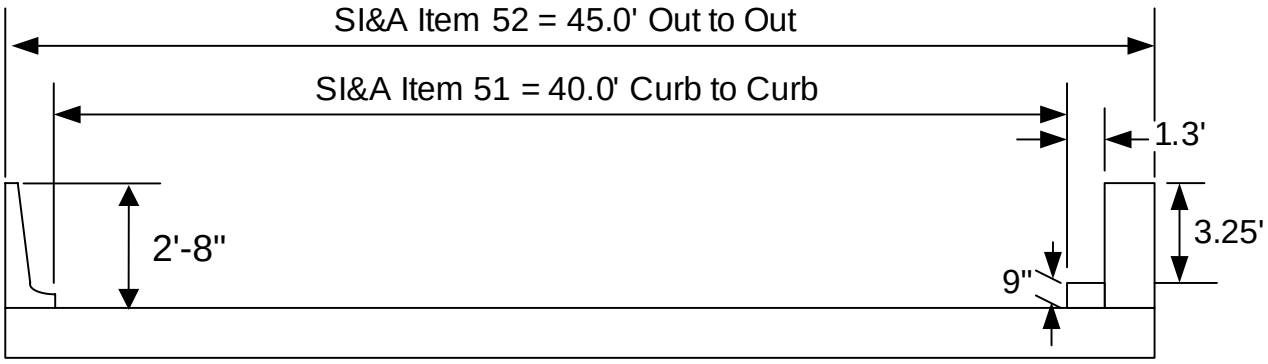
DECK GEOMETRY

SI&A Item 68 Rating: **4**

COMPONENT	REMARKS
Bridge Cross Section	Two 12' through lanes and one ramp lane; ramp lane striping ends in Span 8. Maximum curb to curb = 45'± in west span, narrows to minimum = 40' at spans 3 to 10. The approach roadway widths are consistent with the bridge roadway width (see deck cross section on the next page).
Adequacy of Lane / Shoulder Widths	3 lanes (although ramp lane striping ends in span 8, roadway width is maintained until east end of bridge and traffic functions as three lanes). (Table 2C) ADT = 40,530 (2012) Curb to Curb = 40' **English** SI&A Table 2C - Interstate, Bridge > 200', 11N+7 = 40', Item 68 = **4** **Metric** SI&A Table 2C: 3.4N+2.1 = 12.3m = 40.4' > 40'; Item 68 = **3**; **to be hand corrected to 4 on SI&A print out.**
Vertical Clearance over Deck	Unlimited

*Posting for Load / Speed / Clearance Restrictions (Include a photo)	None

DECK CROSS SECTION



TYPICAL SECTION
(LOOKING WEST)
N.T.S.

CLEARANCES

FEATURE ON STRUCTURE: I-280 Westbound & Ramp* SI&A SHEET 1

**Ramp entering bridge SRI = 00000280_Y101370; ramp exiting bridge SRI = 00000280_X101310*

Minimum Vertical Clearance (SI&A item 10)	Unlimited
Total Horizontal Clearances (SI&A item 47)	40.0' from curb to curb at I-280 westbound (minimum at spans 3 to 10).
Minimum Vertical Clearance (SI&A item 54)	19'-0" under the pier 2 cap at right edge of I-280 Ramp A. 15'-6" under the south fascia girder at either track of Newark Subway (surface) in span 9 (This feature considered not to control due to the limited height of the Newark Subway light rail).
Minimum Vertical Clearance (SI&A item DJ)	19'-0" under the pier 2 cap at right edge of I-280 Ramp A.
Lateral Right (SI&A item 55)	6.0' from assumed right edge of WB lane of Orange St. (Minor Arterial) to N. column of Pier 6 **(Controls; Item 69 = 4).** SI&A update program incorrectly computes Item 69 = 3 due to multiple underpassing routes. 7.0' from the right shoulder stripe of I-280 Ramp A to the face of the south column of Pier 2. 8.0' from centerline of east track of Newark subway ("Tied" w/ Orange Street) to the face of the north column of Pier 9.
Lateral Left (SI&A Item 56)	13.5' from the left edge of I-280 Ramp A to the face of the north column of pier 3.

FEATURE UNDER STRUCTURE: I-280 Ramp A (*SRI = 00000280_Y101310)* SI&A SHEET A

(Formerly designated as Rt. NJ 75 Ramp)

⁎Minimum Vertical Clearance (SI&A Item 10)	24'-4" under the south fascia girder at the center line of Ramp A.
Total Horizontal Clearance (SI&A Item 47)	24.4' from curb to curb.
Minimum Vertical Clearance (SI&A Item DJ)	19'-0" under the pier 2 cap at right edge of I-280 Ramp A.

CLEARANCES (Continued)

FEATURE UNDER STRUCTURE: North First Street *(SRI = 07141895__)* SI&A SHEET B

∗Minimum Vertical Clearance (SI&A Item 10)	Greater than 25'-0".
Total Horizontal Clearance (SI&A Item 47)	40.0' from curb to curb.
Minimum Vertical Clearance (SI&A Item DJ)	Greater than 25'-0".

FEATURE UNDER STRUCTURE: Orange Street *(SRI = 07141922_)* SI&A SHEET C

Minimum Vertical Clearance (SI&A Item 10)	19'-10" under the pier 6 box girder bottom flange.
Total Horizontal Clearance (SI&A Item 47)	40.0' from curb to curb.
Minimum Vertical Clearance (SI&A Item DJ)	19'-10" under the pier 6 box girder bottom flange.

∗Minimum clearance for a 10 foot width of the pavement or traveled part of the roadway where the clearance is greatest shall be coded in feet and inches.

Structure No.:	0730-192	Route:	I-280 WB	Cycle No.:	17
Name:	I-280 WB over I-280 Ramp A, N. 1st St., Orange St. & NJ Transit (Newark Light Rail & Morris and Essex Lines)			Insp. Date:	08/28/2012

FENCING

Coding of SI&A Item FN: **N**

Coding of SI&A Item FO: **N**

Coding of SI&A Item FP (in thousands): **0**

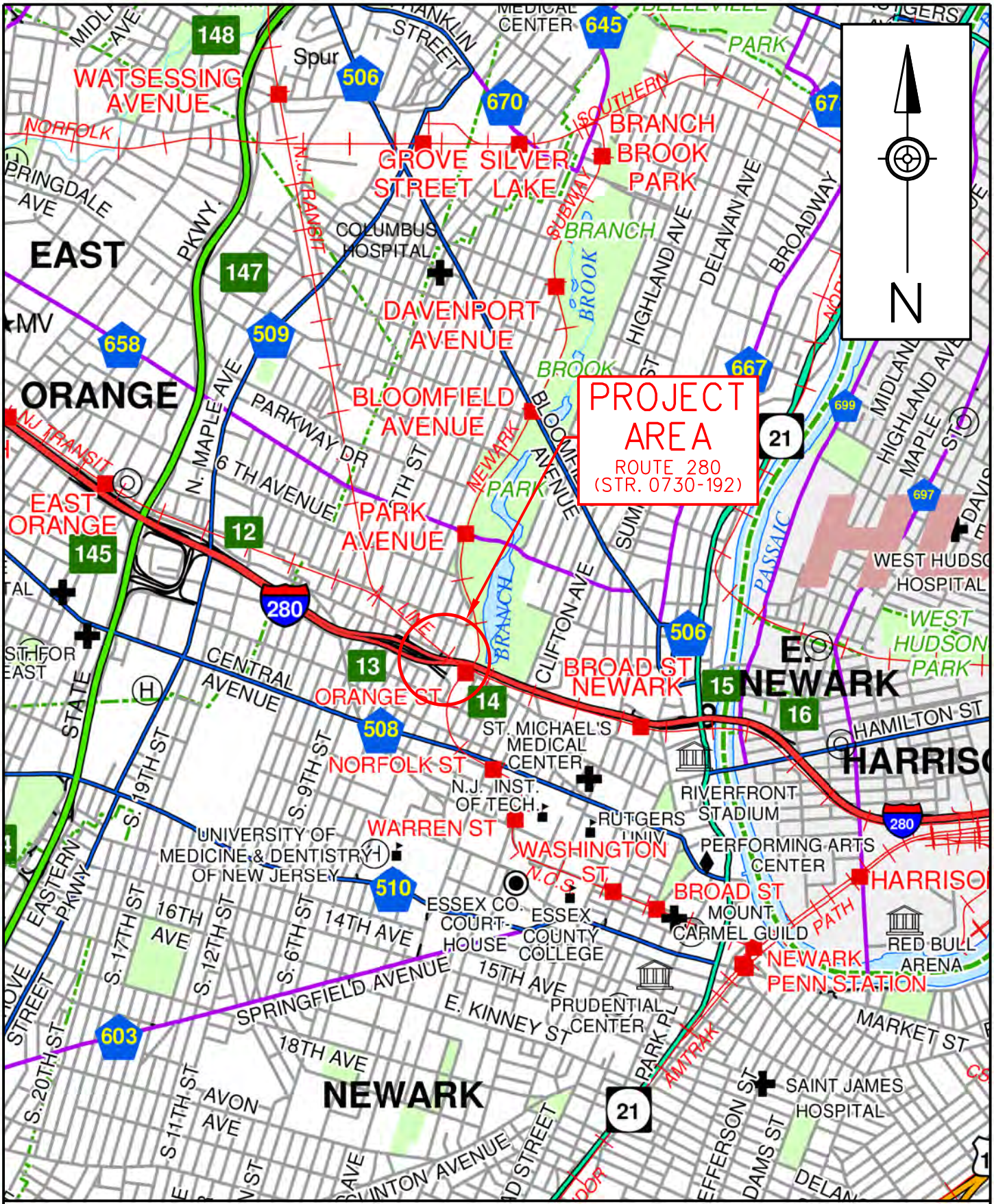
Warranted (Per Design Manual Section 23):	**No**	
If Yes: (#) Description:		
Current Status of Fence & Sidewalk:	Left Side	Right Side
a. Fence:	No	No
b. Sidewalk Width:	N/A	1.3 FT.
c. Total Height of fence above Curb/Sidewalk	N/A	N/A
d. Type of Fence: (per Design Manual Section 23)	N/A	N/A

Action Recommended: None

Estimated Cost: $0

Appendix C

Location Map & Straight Line Diagram



SITE LOCATION MAP - ROUTE 280 OVER 1ST AND ORANGE STREETS (MP 13.40)

CITY OF NEWARK, ESSEX COUNTY, NEW JERSEY

MAPPING BY THE NEW JEREY DEPARTMENT OF TRANSPORTATION

URS

DATE: DECEMBER 2012

SCALE: 1" = 1/2 MILE

FIGURE 1

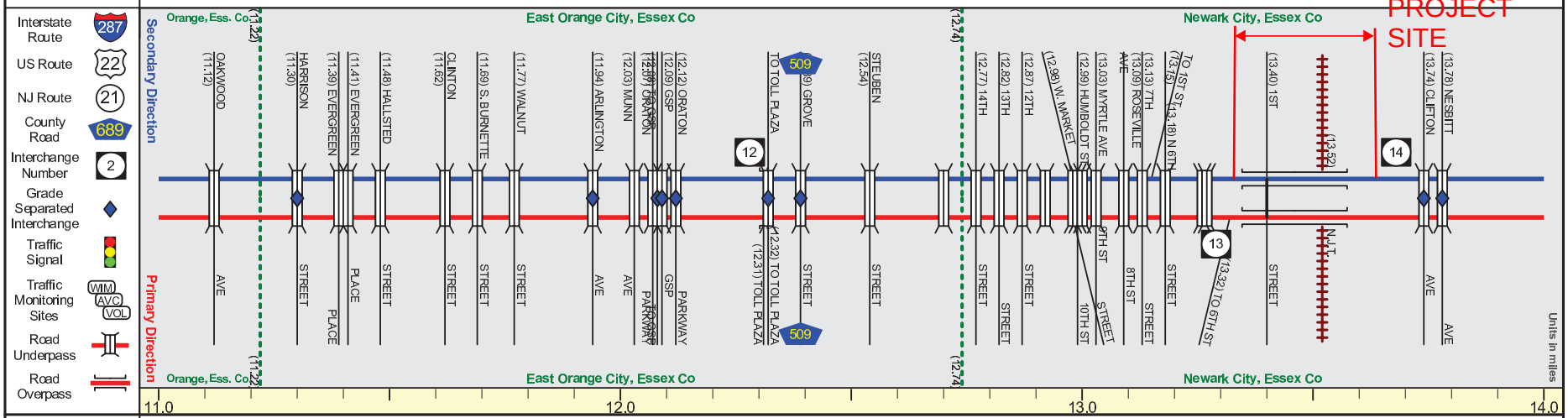
J:\CADD\NJDOT GENERAL ENGINEERING\TASK ORDER X - RT 280 OVER 1ST AND ORANGE CD\03 REPORT\FIGURES\TOX_LOCATIONMAP.DGN
12/27/2012 7:20:26 PM JARED_FATTOROSS

I-280 (West to East)

Mile Posts: 11.000 - 14.000



Pavement	36 | 48 | 60 | 24
Shoulder	12 | 0
Number of Lanes	3 | 4 | 5 | 2
Speed Limit	55 | 50
Street Name	I-280



Street Name	I-280
Jurisdiction	N.J.D.O.T.
Functional Class	Urban Interstate
Federal Aid - NHS Sy	STRAHNET Inter.
Control Section	0730 | 0700 | 0730 | 0731
Speed Limit	55 | 50
Number of Lanes	3 | 4 | 5 | 2
Med. Type	Positive
Med. Width	14 | 8
Pavement	36 | 48 | 60 | 24
Shoulder	12 | 0
Traffic Volume	92,324 (2008) 116,958 (2005) | 77,887 (2008) 83,217 (2005) 83,217 (2005)
Traffic Sta. ID	3-9-785 3-9-785 | 3-5-055 3-5-055 3-5-055
Structure No.	0730179 0730160 0730161 0730162 0730163 0730164 0730165 0730166 0730167 0730168 0730169 0730170 0730171 0730172 0730173 0730180 0730181 0730182 0730183 0730184 0730185 0730186 0730187 0730188 0730189 0730190 0730191 0730192 0731151 0731152
Enlarged Views	

Page Created: May 2010

SRI = 00000280__

Date last inventoried: March 2010

Appendix D

As-built Plans, Right-of-Way Maps & Jurisdictional Limit Maps

- Section 7D, From Sixth Street to the Newark City Railway 1972
- Section 1H, 2J, 3N, 4P, 5V, 6W, 7AC & 8J (Parapet Modification) 1990
- Section 7AA, Ramp Improvement at First Street 1998
- Contract No. 006053070, Laurel Ave. to 6th St. Pavement Repair 2010
- Associated Right-of-Way Maps & Jurisdictional Limit Maps.

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	AU-187(7)	1	75

CS0731

STATE OF NEW JERSEY
HIGHWAY DEPARTMENT

AS BUILT PLANS OF

ROUTE 25A (1927) SECTIONS 3A & 1K
From D.L.&W.R.R. to High Street

PAVING, BRIDGES AND RETAINING WALLS

City of Newark — Essex County

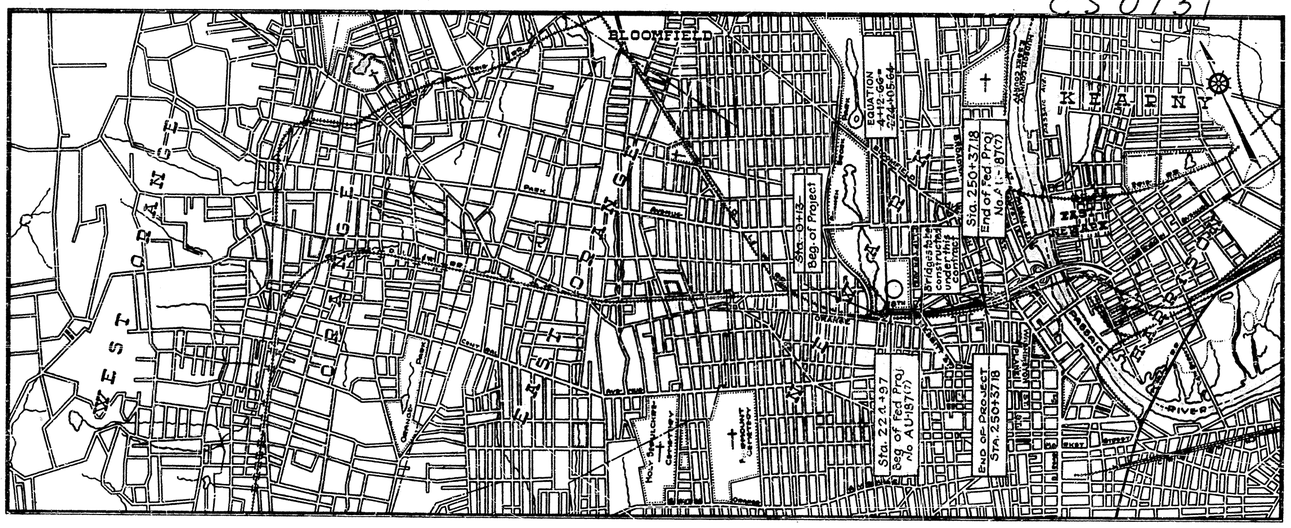
Scales as Indicated — December 1952

INDEX OF SHEETS

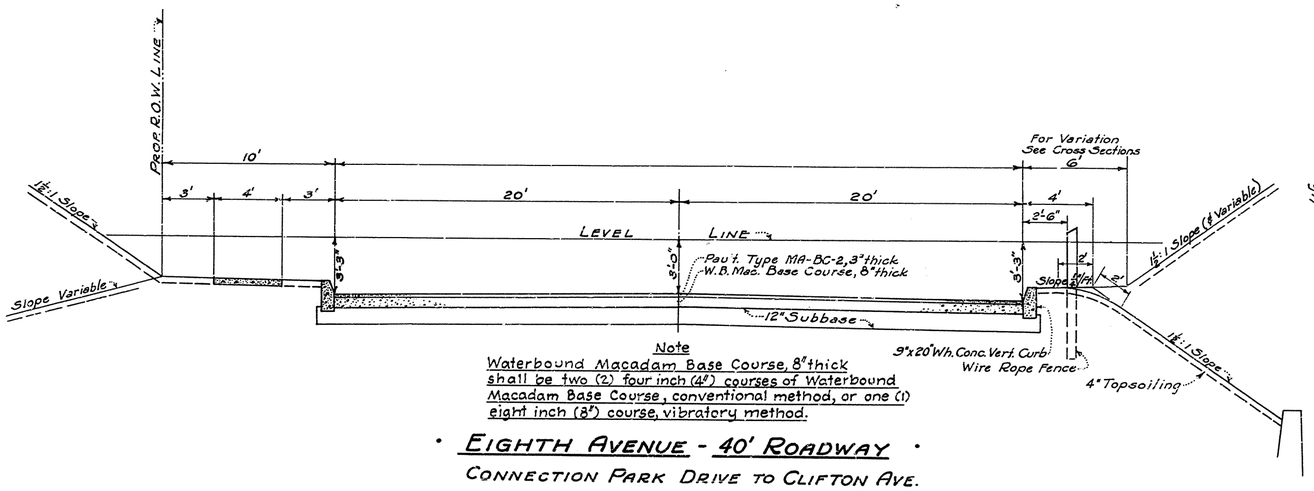
Sheet	Description
1	Key Map
2-3	Typical Sections
4	Estimate of Quantities
5	Distribution of Quantities
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11-12	Profiles
13-17	Cross Sections
18-39	Construction Details
39-75	Bridge Plans

Z-22x48 7.3

CS0731


BLOOMFIELD
NEWARK
EAST ORANGE
ORANGE
Sta. 224+97 Beg. of Fed. Proj. No. AU-187(7)
Sta. 250+37.18 End of Fed. Proj. No. AU-187(7)
Sta. 0+00 Beg. of Project
End of Project Sta. 250+37.18
EQUATION 4+12.66= 224+84.66
Bridge to be constructed over Penna. R.R.
Penna. R.R. Passenger Station
Penna. R.R. Freight Station
Penna. R.R. Coach Yard
Penna. R.R. Engine House
Penna. R.R. Freight Yard
Penna. R.R. Freight Station
Penna. R.R. Freight Station
Penna. R.R. Freight Station

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	AU-187(1)	2	75

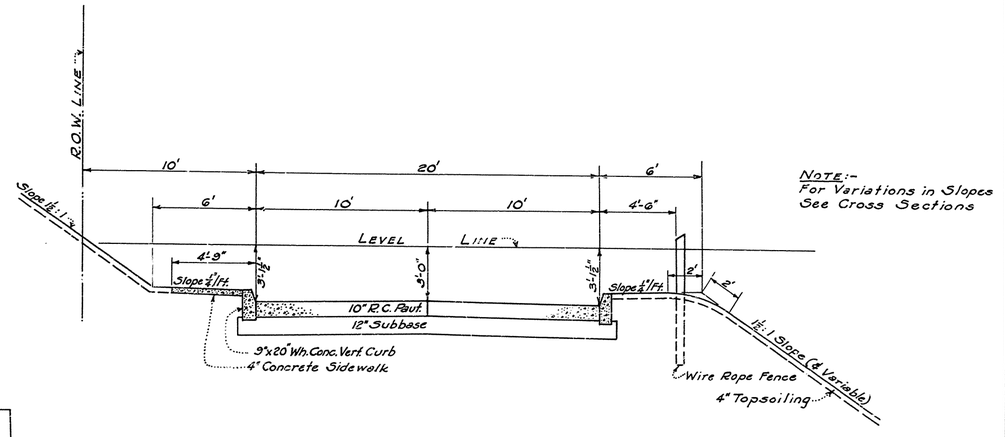


Note
Waterbound Macadam Base Course, 8" thick shall be two (2) four inch (4") courses of Waterbound Macadam Base Course, conventional method, or one (1) eight inch (8") course, vibratory method.

· EIGHTH AVENUE - 40' ROADWAY ·

CONNECTION PARK DRIVE TO CLIFTON AVE.

Scale: ¼" = 1'-0"

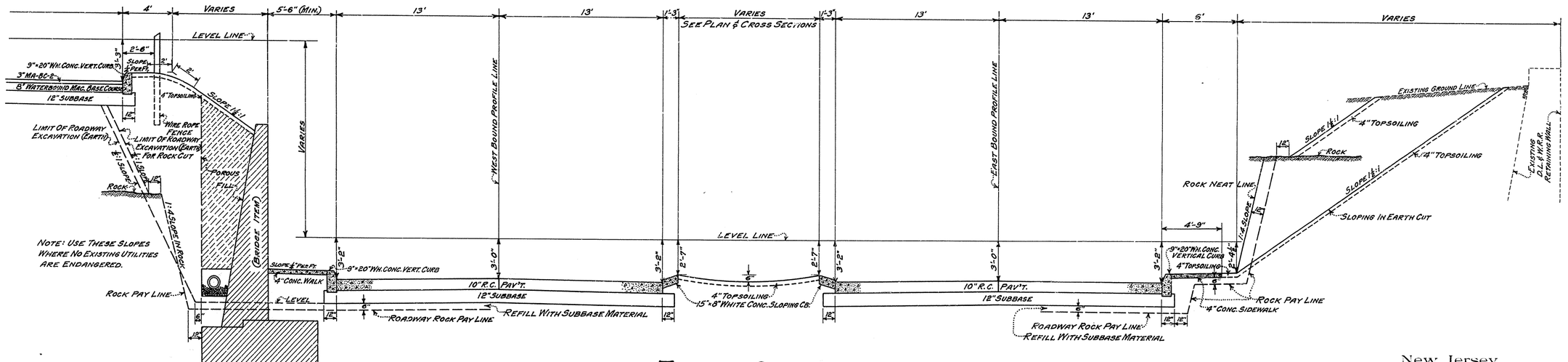


NOTE:- For Variations in Slopes See Cross Sections

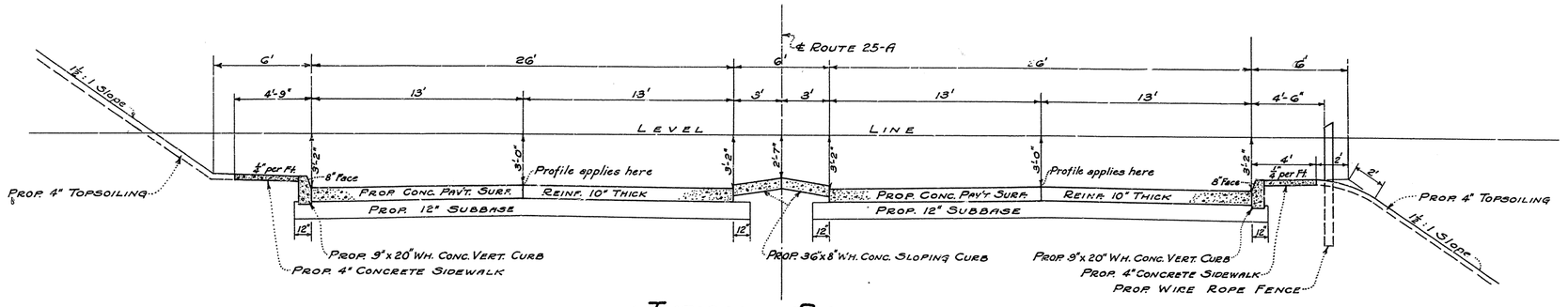
· RAMP "J" ·

20'-0" ROADWAY

Scale: ¼" = 1'-0"


4'
VARIES
5'-6" (MIN.)
13'
13'
1'-3"
VARIES
See Plan & Cross Sections
1'-3"
13'
13'
6'
VARIES
LEVEL LINE
2'-6"
9"x20" Wh. Conc. Vert. Curb
3" MA-BC-2
8" Waterbound Mac. Base Course
12" Subbase
Slope ¾" Ft.
2'
4" Topsoiling
Slope 1:1
Wire Rope Fence
Limit of Roadway Excavation (Earth)
Limit of Roadway Excavation (Earth) For Rock Cut
1½
1½
1½

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	AU-187(7)	3	75

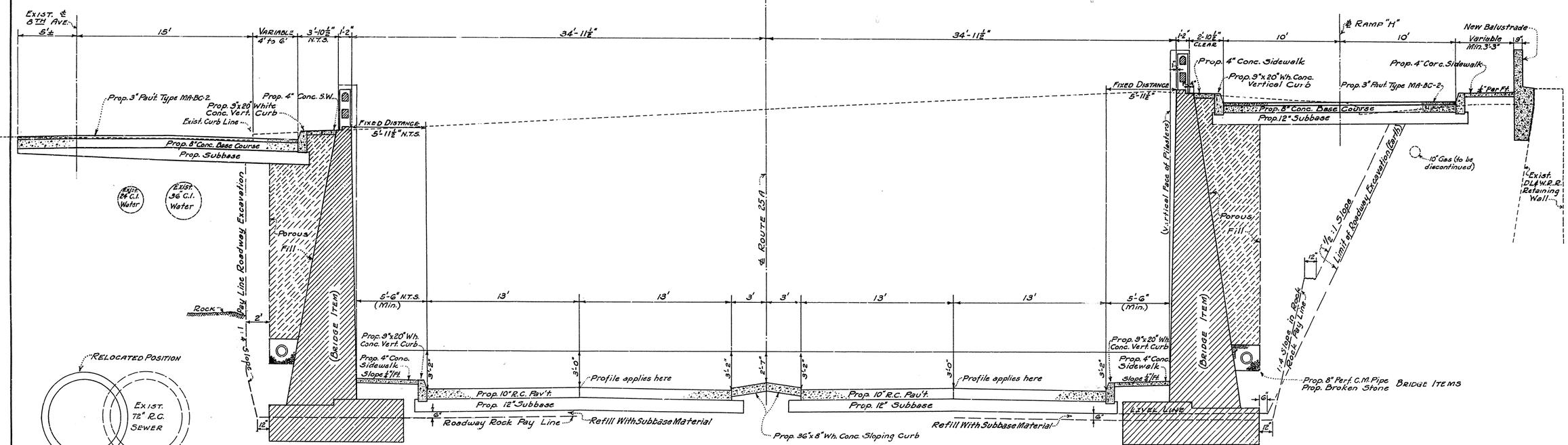


· TYPICAL SECTION ·

STA. 245+67 TO 249+70

Scale: 1/4" = 1'-0"

NOTE :-
For Variations outside limits shown on typical sections, See Cross Sections.



· TYPICAL SECTION ·

STA. 231+00, INCLUDING RAMP "H"

SCALE: ¼" = 1'-0"

New Jersey
State Highway Department
TYPICAL SECTIONS
ROUTE 25A (1927) SECTIONS 3A & 1K
From D. L. & W. R. R. to High Street
PAVING, BRIDGES AND RETAINING WALLS
Scales as Indicated

73 3/75

ROUTE 25-A ORANGE - HIGH

0731 003 078

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	AU 187(7)	6	75

As Built Tie For Plan Sheet No. 1

Files 8, 596 Page 12

Not to Scale



W.B. ℄ & ℞ Curve Data
P.C. 222+24.20
Δ = 34°-39'-07.62"
R = 300
T = 93.59
L = 181.44
P.T. 223+05.64 = 31.56' Rt.,
224+05.88 ℄ Rt. 25A

N. Curb W.B.
P.C. 20' R, 16+19.04, Orange St.
Δ = 2°20'21"
R = 400
T = 8.17
L = 16.33
P.T. 20.33 R, 16+02.71, Orange St.

P.C. 25' R, 14+88.47, Orange St.
Δ = 43° 15' 39"
R = 60
T = 23.82
L = 45.35
P.T. 13' L 220+63.41, W.B. ℄

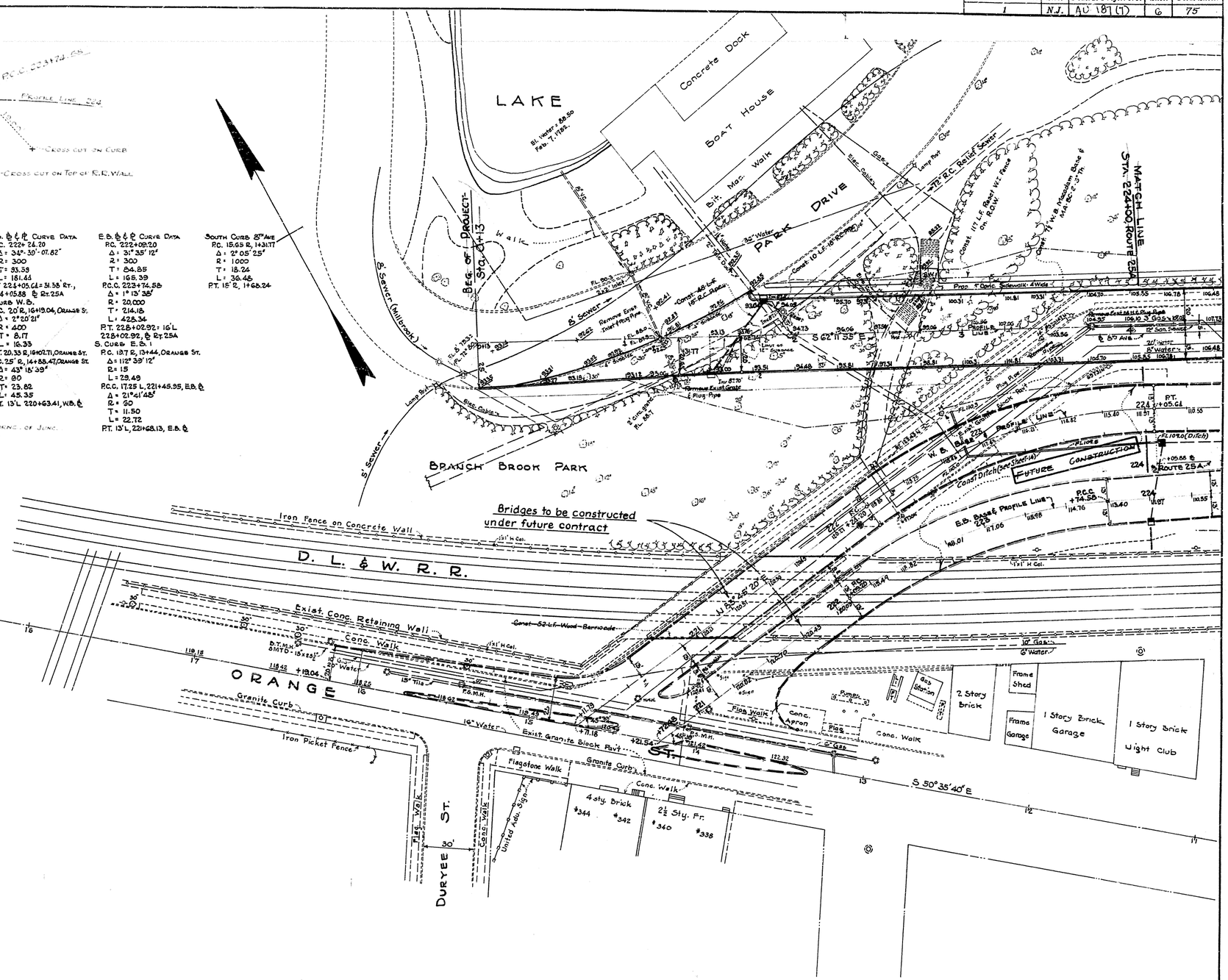
E.B. ℄ & ℞ Curve Data
P.C. 222+09.20
Δ = 31° 35' 12"
R = 300
T = 84.85
L = 165.39
P.C.C. 223+74.58
Δ = 1° 13' 36"
R = 20,000
T = 214.18
L = 428.34
P.T. 225+02.92 = 16' L
228+02.92, ℄ Rt. 25A

S. Curb E.B. 1
P.C. 137' R, 13+44, Orange St.
Δ = 112° 39' 12"
R = 15
L = 29.49
P.C.C. 17.25 L, 221+45.55, E.B. ℄
Δ = 21°-61'-48"
R = 60
T = 11.50
L = 22.72
P.T. 13' L, 221+68.13, E.B. ℄

South Curb 25th Ave
P.C. 15.65 R, 14+31.77
Δ = 2° 05' 25"
R = 1000
T = 18.24
L = 36.48
P.T. 15' R, 14+68.24

As Built Tie Data

From P.C. 224+24.20 to P.T. 224+05.64 on W.Bd. ℞ - Red-eyes & cross-cuts every 50'.
From 220+50 to P.C. 222+24.20 on W.Bd. ℞ - Red-eyes & cross-cuts every 50' & Line cuts on each edge of Bridges.
From 221+00 to P.C. 222+09.20 on E.Bd. ℞ - Red-eyes & cross-cuts every 50'.
From P.C. 222+09.20 to P.C.C. 223+74.58 on E.Bd. ℞ - Red-eyes & cross-cuts every 50'.



See Plan Sheet No. 7

To Be Constructed

Subbase, Type 1	435 Cu. Yds.
4" Topsoiling (From X-Sections)	1303 Sq. Yds.
W.B. Mac. Base Course, 8" Thick 0+35 Rt. to 4+06 Rt. & Lt.	1311 Sq. Yds.
Pav't. Type MA-BC-2, 3" Thick 0+35 Rt. to 4+06 Rt. & Lt.	209.8 Tons
Broken Stone or Washed Gravel 3 Pockets @ 0.17 C.Y. = 0.51 C.Y. 44 L.F. Subbase Drain @ 0.111 C.Y. = 4.88 C.Y.	5.39 Cu. Yds.
Class "C" Concrete (Pipe Plugs) 1+21 Rt. (8" V.C. Pipe) 0.01 C.Y. 1+29 Rt. (8" V.C. Pipe) 0.01 C.Y. 3+45 Rt. (12" Pipe) 0.03 C.Y. 3+79 Rt. (12" Pipe) 0.03 C.Y.	0.08 Cu. Yds.
18" R.C. Pipe	58 Lin. Ft.
6" C.M. Pipe, Bit. Coated, Perf. Ends 3 - 3' Lengths (in Pockets)	9 Lin. Ft.
Inlet Type "B" 1+50 Rt.	1 Unit
Catch Basin, Type "C", 1+83 Lt.	1 Unit
Catch Basin Hood, 1+83 Lt.	1 Unit
Reset Manhole Head. 1+93 Lt.	1 Unit
9" x 20" Wh. Conc. Vertical Curb 0+13 to 4+06 Rt. 390 L.F. 1+75 to 4+06 Lt. 232 L.F.	622 Lin. Ft.
Concrete Sidewalk, 4" Thick 1+75 to 4+06 101 S.Y. 2+82 Lt. (to Steps) 9 S.Y.	110 Sq. Yds.
Reset W.I. Fence 2+89 to 4+06	117 Lin. Ft.
Wood Barricade 221+0 W.B. ℄	52 Lin. Ft.
Steel Wire Fence - Farm Type 2+25 to 3+75 Rt. 8 Th Av. (Top of Slope)	150 Lin. Ft.
Prime Coat	82 Gals.

New Jersey
State Highway Department
PLAN
ROUTE 25A (1927) SECTIONS 3A & 1K
From D. L. & W. R. R. to High Street
PAVING, BRIDGES AND RETAINING WALLS
Scales as Indicated

6
75

0731 006 078

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	AU-187(7)		

CURVE DATA				
No.	Δ	R	T	L
1	1° 36' 42"	500'	7.03	14.07'
2	44° 02' 15"	50'	20.22'	38.43'
3	34° 39' 08"	300'	93.55'	181.44'
4	31° 35' 12"	300'	84.85'	165.35'
5	1° 13' 35"	200'-10"	214.18'	423.34'
6	21° 41' 45"	60	11.50	22.72
7	102° 41' 42"	13		
8	9° 57' 29"	200	17.42	34.76
9	14° 35' 13"	100	12.80	25.46
10	31° 03' 30"	570	156.42	309.03

Existing elevations are underlined.

SKETCH SHOWING RELATION BETWEEN ℄ FOR CROSS SECTIONS AND 8TH AVE ℄, ORANGE ST. ℄ AND W.B. PROFILE LINE. Not to scale

PLAN

SCALE: 1" = 30'

E.B. & W.B. BRIDGES TO BE CONSTRUCTED UNDER SEPARATE CONTRACT.

Const. 108 S.Y. Mac Base Course, 7" Thick (Subbase)
10 Tons MA-BC-1 12" Thick

BRANCH BROOK PARK

D. L. & W. R. R.

P.S. TROLLEY TRACKS

ORANGE ST.

DUKYEE ST.

HECKER ST.

LACKAWANNA AVE.

B.S. TROLLEY TRACKS

Exist. Conc. Steps

B.M. 106

Valve chamber

Iron Picket Fence on Conc. Base

Brush & Trees

Exist. Gran. Block on Sand Base

Exist. Retaining Wall

Exist. Vert. Curb & Conc. Walk

Exist. Junction Box
Const. 80 L.F. 3" G.W.I. Pipe

Exist. 18" R.C. Pipe To Remain

Exist. Sloping Curbs

Exist. R.C. Pavt.

WESTBOUND PL.

EASTBOUND PL.

ROUTE 25A ℄

S 61° 35' 32" E

Exist. Fence on Retaining Wall

Approx. Limits of Prop. Bridge Deck

TUNNEL (12.8' x 12.8' Reinf. Conc.) 18' Below R.P.

Const. 102 L.F. 3" G.W.I. Pipe

Const. 8 L.F. 3" G.W.I. Pipe

Const. 109 L.F. 3" G.W.I. Pipe

Const. 92 L.F. 3" G.W.I. Pipe

Const. 41 L.F. 18" R.C. Pipe

Const. 3 L.F. 6" C.I.N.P.

60" Water Main

Const. 80 L.F. 3" G.W.I. Pipe

Const. 96 L.F. 3" G.W.I. Pipe

Const. 116 L.F. 3" G.W.I. Pipe

Const. Conc. Pavt. & Curb Monolithic

Const. 39 L.F. 3" G.W.I. Pipes

Const. 24.8 L.F. 3" G.W.I. Pipe

Const. 55 L.F. 3" G.W.I. Pipe

Const. 105 L.F. 3" G.W.I. Pipe

Const. 29 L.F. 3" G.W.I. Pipe

Const. 53 L.F. 3" G.W.I. Pipe

Proposed 30" Water Main

Proposed Cross Sections

Sloping Curb (10" Trans)

End Vert. & Begin

Exist. Conc. Retaining Wall

Granite Curb

Conc. Walk

Exist. Grade Block on Sand Base

Exist. Gran. Block Pavt.

Conc. Wall

Iron Fence on Conc. Wall

Wood Fence

Elec. Cable

Shrubs

Trees & Shrubs

Mixed Walk

B.S. Walk

B.S. Curb

Conc. Walk

Granite Curb

Lift

Pumps

Dirt & Gravel Surface

Pit

Gas Sta.

2 Sty. Brick

1 Sty. Brick Gar.

Fe. Shed

Fe. Gar.

1 Sty. Brick Westinghouse Warehouse

4 Sty. Brick

2½ Sty. Fe.

3 Sty. Fe.

Conc. Walk

Granite Curb

Exist. Grade Block Pavt.

Exist. Conc. Wall

Exist. Fence on Retaining Wall

Exist. Grade Block on Sand Base

Tel. Ducts

Elec. Cond.

Gas Mains

Water Mains

Sewer Mains

Conc. Walk

Granite Curb

Exist. Grade Block Pavt.

Conc. Wall

Exist. Fence on Retaining Wall

Exist. Grade Block on Sand Base

Tel. Ducts

Elec. Cond.

Gas Mains

Water Mains

Sewer Mains

Const. 1 L.F. 12" R.C. Pipe

Const. 227 L.F. 12" R.C. Pipe

Const. 8 L.F. 8" C.I.P.

Const. 4 L.F. 8" C.I.P.

Const. 3 L.F. 8" C.I.P.

Const. 2 L.F. 8" C.I.P.

Const. 1 L.F. 8" C.I.P.

Const. 1 L.F. 6" C.I.P.

Const. 1 L.F. 6" C.I.P.

Const. 1 L.F. 6

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	AU-187(7)	7	75

· TO BE CONSTRUCTED ·

PAVEMENT EXCAVATION (Hatched)	2469 ~~2774~~ SQ. YDS.	
SUBBASE TYPE 1	2322 ~~2778~~ CU. YDS.	
SUBBASE TYPE 2	0 ~~28~~ CU. YDS.	
4+50 to 5+00, 8TH AV.	0 26 C.Y.	
1+00 Rt. & Lt., 8TH AV.	0 2 C.Y.	
SUBGRADE	6762 ~~7789~~ SQ. YDS.	
4" TOPSOILING (From X-Sections)	2616 ~~2834~~ SQ. YDS.	
W.B. MAC. BASE COURSE, 8" THICK	0 ~~2324~~ SQ. YDS.	
4+06 to 9+29, 8TH AVE.		
CONCRETE BASE COURSE, 8" THICK	1374 SQ. YDS 1538	
9+29, 8TH AV. to RAMP "J"	827 S.Y. 765	
-0+22 to 2+92, RAMP "H"	747 S.Y. 813	
CONC. PAVT. SURFACE, REINF. 10" THICK	~~5213~~ SQ. YDS. 5224	
PAVT. TYPE MA-BC-2, 3" THICK	~~603.2~~ TONS 296.1	
On W.B. Mac. Base Course	0 371.8 Tons	
On 8" Conc. Base Course	296.1 231.4 Tons	
DOWEL TYPE TRANSVERSE JOINTS	~~572~~ LIN. FT. 540	
RESET STONE BLOCKS	~~+62~~ SQ. YDS. 121	
~~4+00~~ Clifton Ave.	10 S.Y. 9	
~~9+71~~, 8TH Ave.	1+46-1181 Rt. 8 S.Y.	
12+13 Lt. to 14+88 Rt. 8TH Av.	130 S.Y. 98	
1+00, 8TH Ave.	14 S.Y. 8	
BROKEN STONE OR WASHED GRAVEL	~~21.64~~ CU. YDS. 16.58	
12+5 Pockets @ 0.17 C.Y.	= 2.55 C.Y. 2.04	
172 L.F. Subbase Drains @ 0.111 C.Y.	= 19.09 C.Y. 14.54	
PAVT. TYPE SP-1, VAR. THICK.	~~26.88~~ TONS 18.00	
10+13 to 12+13, 8TH AVE.		
POROUS FILL	2530 CU. YDS.	

CLASS "C" CONCRETE (Pipe Plugs)	C.0C ~~0.21~~ CU. YDS.	
5+77, 8TH Av. (2-12" Pipes)	0.06 C.Y. 0	
7+81 Lt. 8TH Av. (2-12" Pipes)	~~0.06~~ C.Y. 0	
9+42 Lt. 8TH Av. (12" Pipe)	~~0.03~~ C.Y. 0	
9+64 Rt. 8TH Av. (12" Pipe)	0.03 C.Y.	
12+15 Lt. 8TH Av. (12" Pipe)	0.03 C.Y.	
15" R.C. PIPE	316 ~~315~~ LIN. FT.	
18" R.C. PIPE	931 ~~975~~ LIN. FT.	
72" R.C. PIPE	200 ~~202~~ LIN. FT.	
12" C. I. PIPE	28 ~~60~~ LIN. FT.	
18" C. I. PIPE	69 ~~64~~ LIN. FT.	
6" C.M. PIPE, BIT. COAT. PERF. ENDS	42 ~~51~~ LIN. FT.	
~~12~~ 3' Lengths (In Pockets)	~~33~~ L.F. 30	
2 - 6' Lengths (227+75)	12" L.F.	
6" C. I. PIPE (SAN. SEWER) incl. Bends	140 LIN. FT.	
(7 House Connections, #235 to 247, 8TH AVE.)		
MANHOLES	2 UNITS	
1+36 Lt. RAMP "H"	1 Unit	
3+20 Lt. RAMP "H"	1 Unit	
INLETS, TYPE "B"	6 UNITS	
Sta. 224+00 Rt. E.B.	1 Unit C	
227+30 Lt. W.B.	1 Unit	
227+50 Rt. E.B.	1 Unit	
230+~~75~~ Lt. W.B.	1 Unit	
230+~~75~~ Rt. E.B.	1 Unit	
1+86 Lt. RAMP "H"	1 Unit	
9+39 Lt. 8TH Ave.	1 Unit	

· TO BE CONSTRUCTED ·

INLETS, TYPE "E"	2 ~~3~~ UNITS	
224+10 Rt. W.B.	~~1~~ Unit 0	
227+75 Lt.	1 Unit	
230+~~75~~ Rt.	1 Unit	
CATCH BASIN TYPE "C", 3+50 Rt. 8TH Av.	0 ~~1~~ UNIT	
CATCH BASIN TYPE "C", USING EXIST. C.B.'S.	2 ~~3~~ UNITS	
9+40 Lt. 8TH AVE.	0 ~~1~~ Unit	
11+25 Rt. 8TH AVE.	1 Unit	
0+99 Lt. 8TH AVE.	1 Unit	
CATCH BASIN HOODS	2 ~~4~~ UNITS	
9+40 Lt. 8TH AVE.	0 ~~1~~ Unit	
9+50 Rt. 8TH AVE.	0 ~~1~~ Unit	
11+25 Rt. 8TH AVE.	1 Unit	
0+99 Lt. 8TH AVE.	1 Unit	
RESET MANHOLE HEADS	4 ~~8~~ UNITS	
8+33 Lt. 8TH AVE.	0 ~~1~~ Unit; 4+65 Lt. 8TH Av. ~~1~~ Unit 0	
9+06 Lt. " "	0 ~~1~~ Unit; 7+42 Lt. 8TH Av. ~~1~~ Unit 0	
9+33 Lt. " "	0 ~~1~~ Unit; 9+50 Rt. 8TH Av. 1 Unit	
9+79 Rt. " "	1 Unit; 9+53 Lt. 8TH Av. ~~1~~ Unit 0	
10+83 Lt. " "	0 ~~1~~ Unit 10+10 Rt. 8TH Av. 1 Unit	
1+03 Rt. " "	0 ~~1~~ Unit 12+18 Rt. 8TH Av. 1 Unit	
9"x9" WH. CONC. VERT. CURB (ON BRIDGES)	~~428~~ LIN. FT. 432	
2+99 to 3+76 Lt. CLIFTON AV.	85 L.F. 87.2	
2+99 to 3+78 Rt. CLIFTON AV.	110 L.F. 106.5	
0+01 to 0+99 Rt. NESBITT ST.	125 L.F. 127.8	
0+34 to 1+36 Lt. NESBITT ST.	108 L.F. 110.5	
RESET STONE BLOCKS ON EARTH S.A.#4	SQ. YDS. 146	

9"x20" WH. CONC. VERTICAL CURB	~~370~~ LIN. FT. 3000	
224+97 to 233+50 Lt. W.B.	~~845~~ L.F. 845.3	
224+96 to 233+50 Rt. E.B.	~~846~~ L.F. 846.2	
0+60 to 1+91 Lt. RAMP "H"	~~127~~ L.F. 130.7	
2+78 to 3+68 Lt. RAMP "H"	90 L.F. 90.2	
0+22 to 2+33 Rt. RAMP "H"	~~214~~ L.F. 217.6	
2+77 to 3+68 Rt. RAMP "H"	~~95~~ L.F. 96.6	
4+05 to 9+70 Lt. 8TH Ave.	~~574~~ L.F. 0	
~~4+06~~ to 9+68 Rt. 8TH Ave.	~~542~~ L.F. 423.9	
10+~~68~~ to 11+38 Rt. 8TH Ave.	~~106~~ L.F. 98.6	
11+~~38~~ Rt. 8TH Av. to 5+22 Rt. RAMP "J"	~~173~~ L.F. 169.1	
4+~~97~~ to 5+25 Lt. RAMP "J"	~~32~~ L.F. 29.5	
1+46 to 1+81 Rt. 8TH Ave.	~~35~~ L.F. 32.6	
2+77 to 2+99 Lt. CLIFTON AV.	22 L.F. 22.7	
15"x8" WH. CONC. SLOPING CURB	~~877~~ LIN. FT. 878	
224+97 to 227+73 Rt. W.B.	~~278~~ L.F. 279.0	
224+96 to 227+~~78~~ Lt. E.B.	279 L.F. 280.0	
227+78 to 229+~~35~~ Rt. & Lt.	~~320~~ L.F. 319.0	
36"x8" WH. CONC. SLOPING CURB	~~824~~ LIN. FT. 825	
229+~~35~~ to 230+~~78~~ Rt. & Lt.	~~278~~ L.F. 274	
230+~~78~~ to 233+50 Rt. & Lt.	~~546~~ L.F. 551	
CONCRETE GUTTER, 6" THICK	~~12~~ SQ. YDS. 12	
227+75 Rt. & Lt.	~~6.8~~ S.Y. 6.3	
230+75 Rt. & Lt.	~~5.3~~ S.Y. 5.7	
FEDERAL PROJECT MARKER POST	1 UNIT	
224+~~81~~ Rt. E.B. 19.5 Rt.		
REINFORCEMENT STEEL	2453 LBS.	

· TO BE CONSTRUCTED ·

CONCRETE SIDEWALK, 4" THICK	1207 ~~1329~~ SQ. YDS.	
225+~~02~~ to 233+50 Lt. W.B.	~~471~~ S.Y. 439	
224+96 to 233+50 Rt. E.B.	~~429~~ S.Y. 408	
~~4+06~~ to 9+~~68~~ Lt. 8TH AVE.	~~256~~ S.Y. 4	
10+~~23~~ to 11+~~38~~ Rt. 8TH AVE.	~~38~~ S.Y. 31	
11+~~38~~ Rt. 8TH Av. to 5+22 Lt. RAMP "J"	~~58~~ S.Y. 55	
4+~~74~~ to 5+~~25~~ Rt. RAMP "J"	~~21~~ S.Y. 18	
0+~~60~~ to 1+~~91~~ Lt. RAMP "H"	~~31~~ S.Y. 24	
2+78 to 3+68 Lt. " "	~~21~~ S.Y. 16	
0+23 to 2+~~33~~ Rt. " "	~~116~~ S.Y. 114	
2+~~73~~ to 3+68 Rt. " "	6.9 S.Y.	
2+78 to 2+99 Lt. CLIFTON AV.	~~26~~ S.Y. 24	
RESET W.I. FENCE	0 ~~503~~ LIN. FT.	
4+05 to 9+06 Lt. 8TH AVE.		
WIRE ROPE FENCE	29 ~~45~~ LIN. FT.	
~~5+00~~ Lt. RAMP "J" 4+11 - 4+39		
GUARD FENCE ANCHORAGE	1 UNIT	
~~5+00~~ Lt. RAMP "J"		
WOOD BARRICADE 510, 15'± TO 511 77' LT	16 LIN. FT.	
CYCLONE FENCE 6 FT. HIGH S.A.#7	LUMP SUM	

D. L. & W. R. R.

Bridges to be constructed under this contract

BEG. OF FEDERAL PROJECT (STA. 224+97.) AU-187(7)

MATCH LINE STA. 224+97

MATCH LINE STA. 233+50

RT. 25A & STA. 224+00

Northerly Track

12'-12.8" x 12.6" Reinf. Conc. Tunnel (18'± below R.R.)

Conc. Balustrade (Bridge Item)

Approx. Location Conc. Balustrade (Bridge Item)

Brook Branch Park

Aqueduct Alley

Eighth Ave.

Clifton Ave.

Shrubbery

Trees

Sand Box

Pavilion (Brick Floor)

Exist. Granite Block Curb

Exist. Sheet Asphalt Pavt.

Exist. Rolling

Exist. Gran. Block on Sand Base

Prop. 7" W.B. Mac. Base on S.A.#4

Const. 146 S.Y. Reset Stone Blocks on Earth S.A.#4

Const. 410 L.F. Cyclone Fence, 6' High on S.A.#7

Remove M.H. & Plug Pipes

Remove Inlet & Plug Pipes

Reset Control Vault

Exist. W.I. Fence to be reset on R.O.W. Line

Proposed R.O.W.

Prep. Conc. Sidewalk, 4' Wide

Conc. Top of Valve Chamber

Sewer 72" R.C.

12" Sub-base - 12' to 4' - 4" Subbase Type 2

12" to 12" - 12" Subbase Water

To Be Abandoned

12" San. Sewer to be abandoned

Const. 38 L.F. 12" C.I. Pipe, Subbase Outlet Trenches and Limit of 12" Subbase

Const. 205 L.F. 72" R.C.C. Pipe

Const. 142 L.F. 18" C.I. Pipe

Const. 28 L.F. 12" C.I. Pipe

Const. 22 L.F. 15" C.I. Pipe

Const. 410 L.F. 18" R.C. Pipe

Const. 33 L.F. 15" R.C. Pipe

Const. 34 L.F. 15" R.C. Pipe

Const. 14 L.F. 15" R.C. Pipe

Const. 36 L.F. 15" R.C. Pipe

Const. 22 L.F. 18" R.C. Pipe

Const. 120 L.F. 18" R.C. Pipe

Const. 38 L.F. 18" R.C. Pipe

Const. 22 L.F. 15" R.C. Pipe

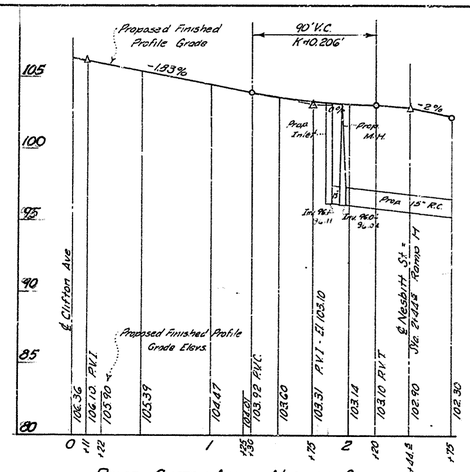
Const. 42 L.F. 15" R.C. Pipe

Const. 36 L.F. 15" R.C. Pipe

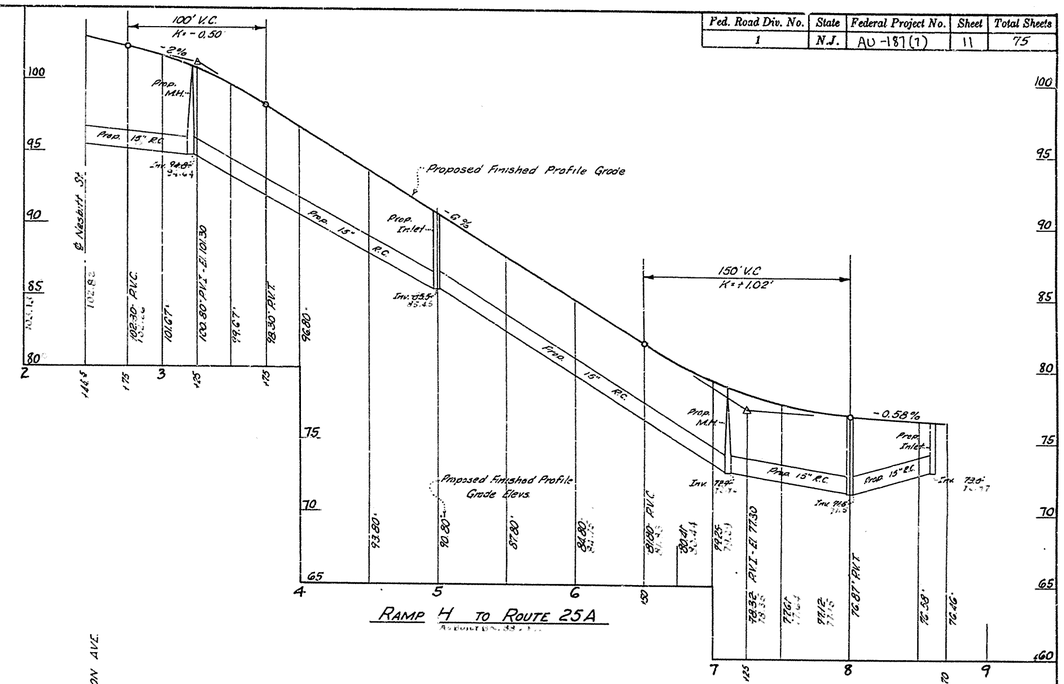
Const. 35 L.F. 15" R.C. Pipe

Const. 46 L.F. 15

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	AD-187(1)	11	75

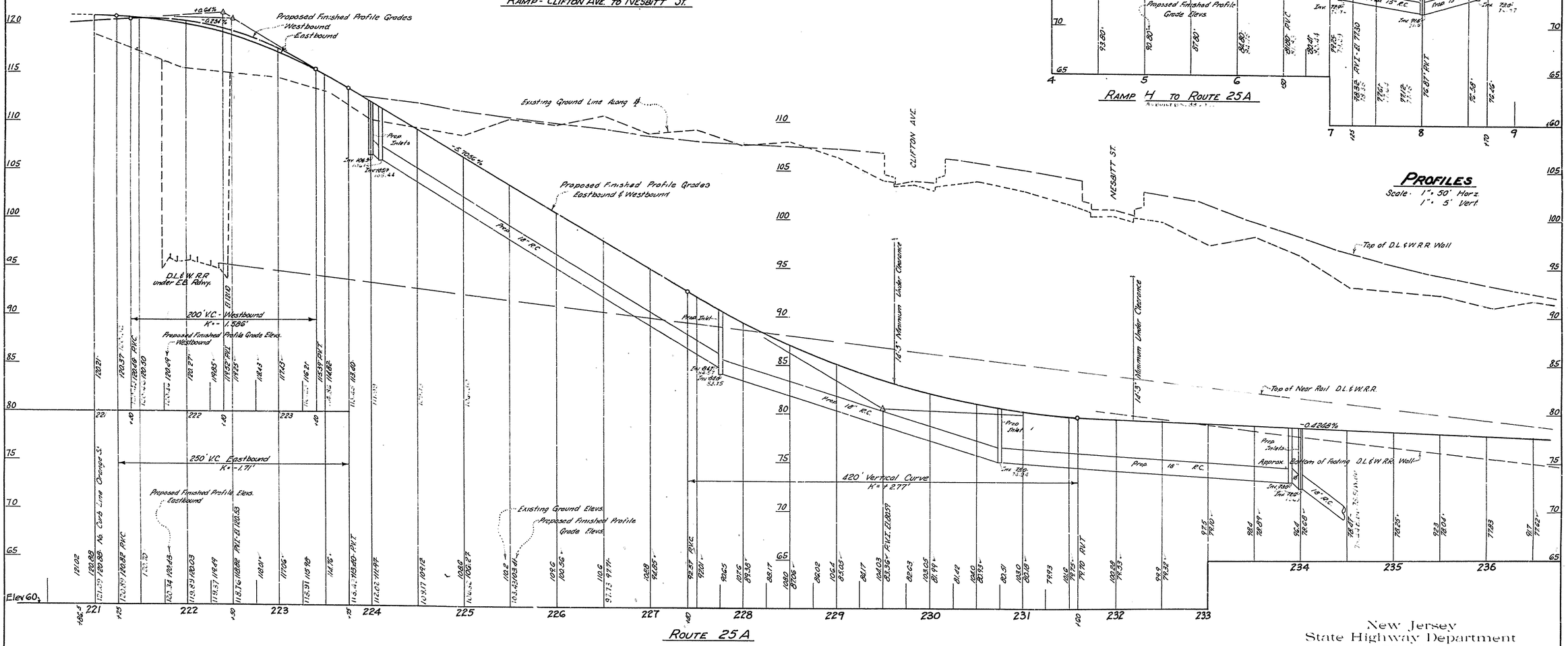


RAMP - CLIFTON AVE. TO NESBITT ST.



RAMP H TO ROUTE 25A

PROFILES
Scale: 1"= 50' Horz
1"= 5' Vert



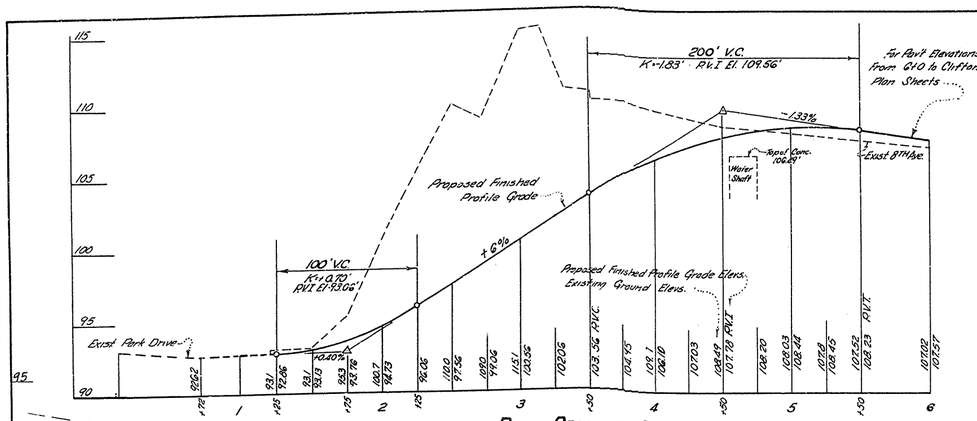
ROUTE 25A

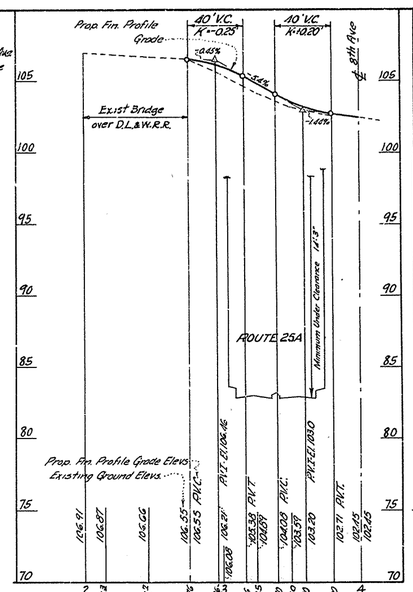
New Jersey
State Highway Department
PROFILE
ROUTE 25A (1927) SECTIONS 3A & 1K
From D. L. & W. R. R. to High Street 12
PAVING, BRIDGES AND RETAINING WALLS 75
Scales as Indicated

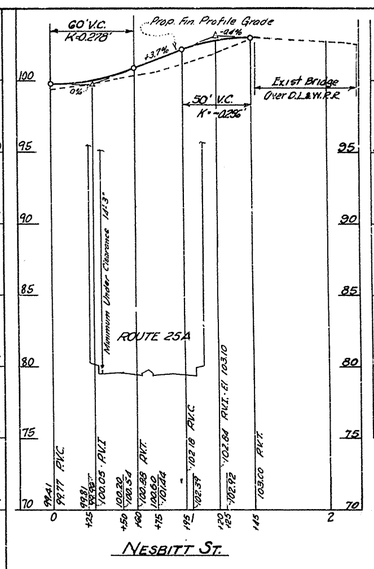
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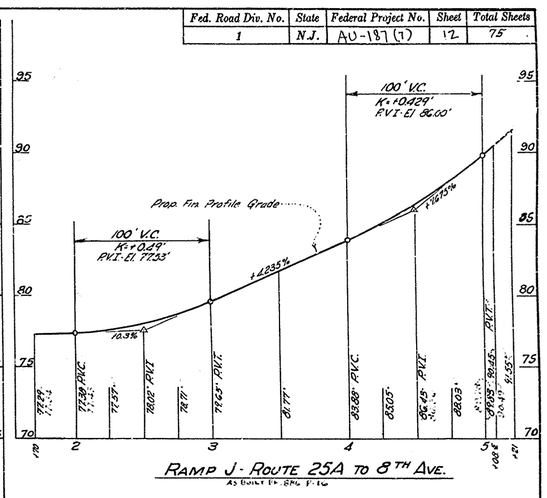
0731 012 078

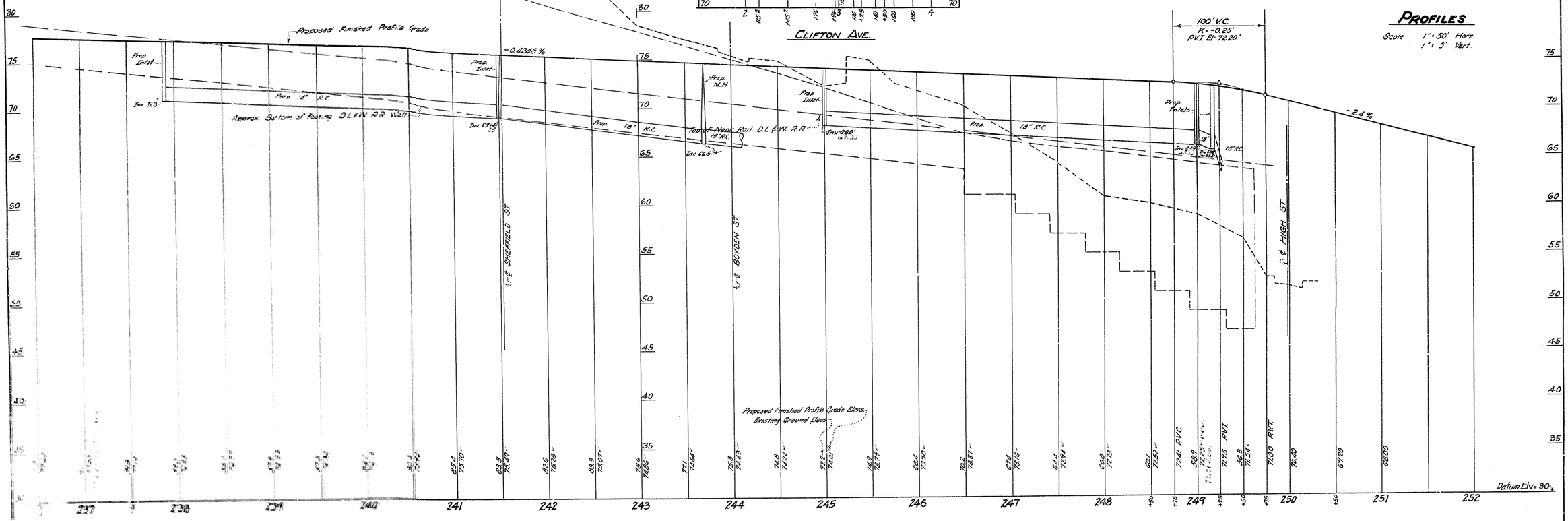
Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	AU-187(7)	12	75











New Jersey
State Highway Department
PROFILE
ROUTE 25A (1957) SECTIONS 3A & 1K
From D.L. & W.R.R. to High Street 13 (12) / 75
PAVING, BRIDGES AND RETAINING WALLS
Scales as Indicated

PROFILES
Scale 1" = 50' Horz.
1" = 5' Vert.

0731 013 078

UTILITIES
PUBLIC SERVICE ELECTRIC AND GAS - ELECTRIC
PUBLIC SERVICE ELECTRIC AND GAS - GAS
VERIZON - NEW JERSEY INC.
NEW JERSEY DEPARTMENT OF TRANSPORTATION - INTELLIGENT TRANSPORTATION SYSTEM

State of New Jersey
Department of Transportation

PLANS OF

ROUTE I-280

LAUREL AVENUE TO 6TH STREET PAVEMENT REPAIR

CONTRACT NO. 006053070

STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

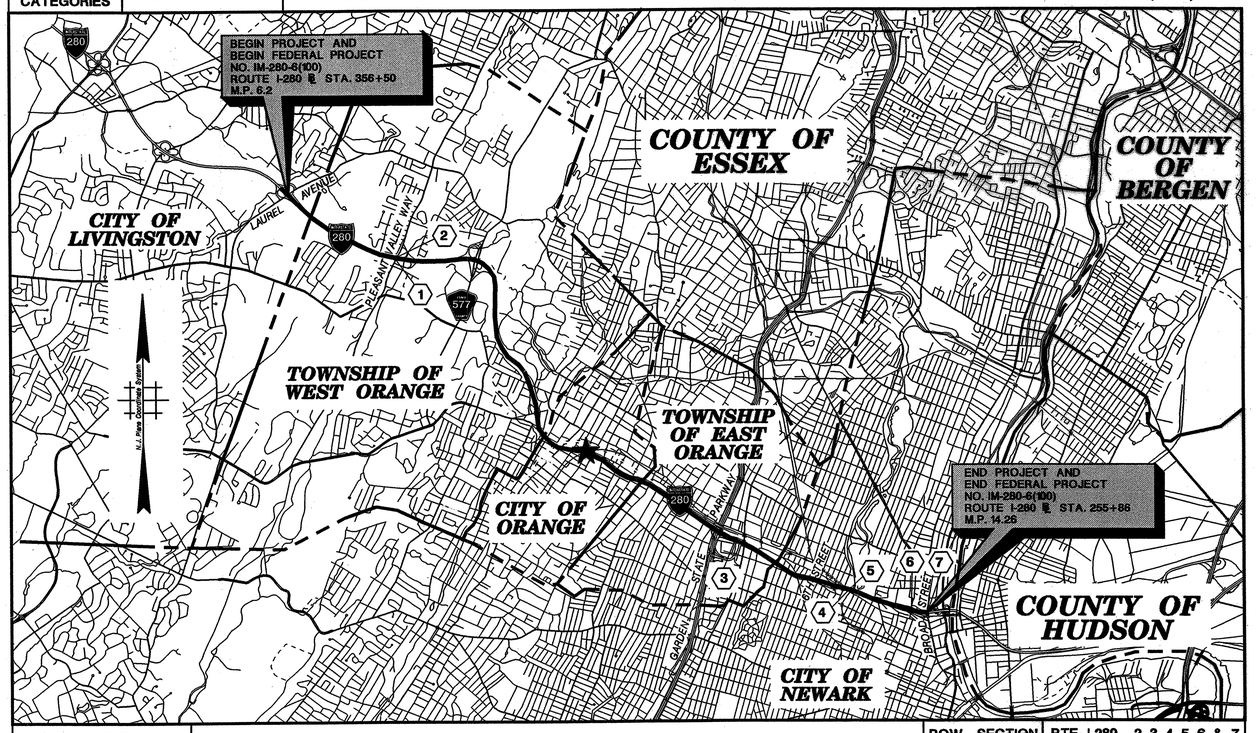
INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	KEY
2-4	ESTIMATE-DISTRIBUTION OF QUANTITIES
5-16	TYPICAL SECTIONS
17	PLAN SHEET INDEX
18-50	CONSTRUCTION PLANS
51-85	PAVEMENT REPAIR TABLES
86-88	TRAFFIC CONTROL DETAILS
89-114	ITS PLANS
115-132	ITS DETAILS
133	TRAFFIC STRIPING PLANS
134-150	CONSTRUCTION DETAILS
151-157	BRIDGE PLANS

BRIDGES IN THIS CONTRACT		
NO.	DESCRIPTION	BRIDGE #
1	ROUTE I-280 E.B. OVER PLEASENT VALLEY WAY	0729-158
2	ROUTE I-280 W.B. OVER PLEASENT VALLEY WAY	0729-159
3	ROUTE I-280 E.B. & W.B. OVER RAMP "A"	0730-172
4	ROUTE I-280 E.B. OVER RT. 75 LOCAL STREETS NJ.T.R.R AND NEWARK RR	0730-191
5	ROUTE I-280 W.B. OVER RT. 75 LOCAL STREETS NJ.T.R.R AND NEWARK RR	0730-192
6	ROUTE I-280 OVER M.L.K. BLVD.	0731-154
7	ROUTE I-280 OVER BROAD ST; STATE ST; AND UNIVERSITY AVE.	0731-155

CITY OF LIVINGSTON, CITY OF ORANGE **ESSEX COUNTY**
TOWNSHIP OF WEST ORANGE
TOWNSHIP OF EAST ORANGE
CITY OF NEWARK

SCALES AS INDICATED **MARCH 2008** C.S. 0729, 0730, 0731

PROJECT CATEGORIES	I - 3R



HIGHWAY TYPE - F.P.

ROW SECTION | RTE I-280 - 2, 3, 4, 5, 6 & 7

STANDARD ROADWAY CONSTRUCTION – TRAFFIC CONTROL – BRIDGE CONSTRUCTION DETAILS BOOKLET 2001, AND STANDARD ELECTRICAL DETAILS BOOKLET, 2001, ARE APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

★ MID-POINT OF PROJECT
LONGITUDE : 40°46'32.02" N
LATITUDE : 74°14'29.53" W

DESIGN TRAFFIC DATA		
A.D.T. (2008) - 2 WAY	=	106710 vpd
A.D.T. (2029) - 2 WAY	=	122260 vpd
D.H.V. (2029) - 2 WAY	=	12410 vph
D	=	52 %
T	=	8 %
V	=	65 M.P.H.

KEY MAP

5280' 2640' 0 5280'

TOTAL LENGTH OF THE PROJECT = 42,557 LIN. FT. OR 8.06 MILES

TOTAL LENGTH OF FEDERAL PROJECT NO. IM-280-6(100) = 42,557 LIN. FT. OR 8.06 MILES

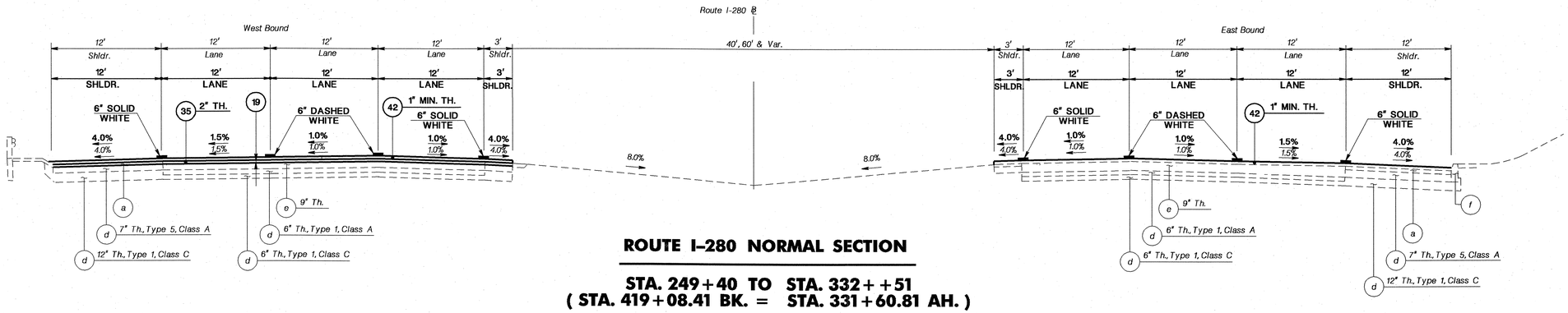
2001 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION TO GOVERN

Submitted by _____ 12/10/07
Director, Division of Project Management — Date

Approved by _____ 12/20/07
State Transportation Engineer — Date

NJDOT Design Services
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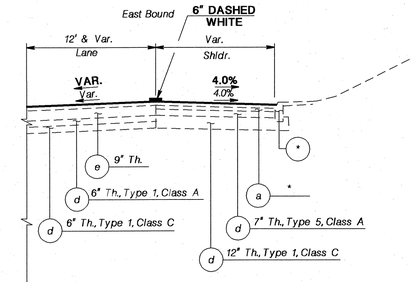
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N.J.	IM-280-6(100)

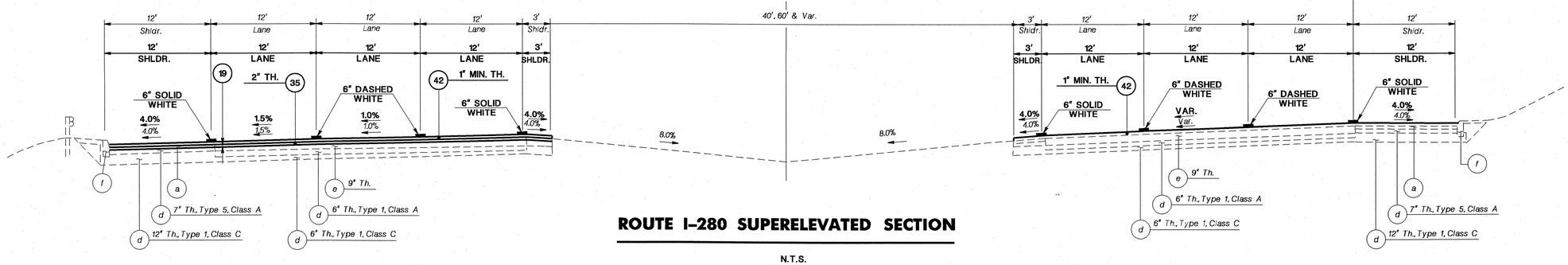


ROUTE I-280 NORMAL SECTION

STA. 249+40 TO STA. 332++51
(STA. 419+08.41 BK. = STA. 331+60.81 AH.)

N.T.S.





ROUTE I-280 SUPERELEVATED SECTION

N.T.S.

Existing Materials	
Item No.	***Description***
a	*Pavement Type FA-BC1*
b	*Bituminous Stabilized Base Course*
c	*Quarry-Processed Stone Subbase*
d	*Subbase*
e	*Concrete Surface Pavement Reinforced*
f	*9" x 20" White Concrete Vertical Curb*
g	*White Concrete Barrier Curb*

PROPOSED MATERIALS		
PAY ITEM NO.	**STD. ITEM NO.**	**DESCRIPTION**
19	2B25N	MILLING 2" VARIABLE DEPTH
35	N4F02	SUPERPAVE HOT MIX ASPHALT 12.5H76 INTERMEDIATE COURSE
42	N4F03	MODIFIED OPEN GRADED FRICTION COURSE - 3

TS-1 / TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE I-280

CONTRACT NO. 006053070

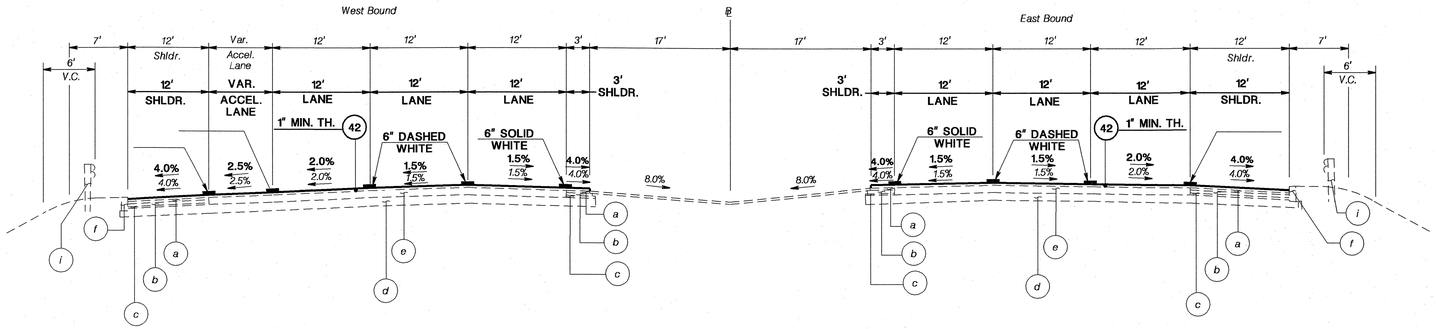
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NJDOT Design Services

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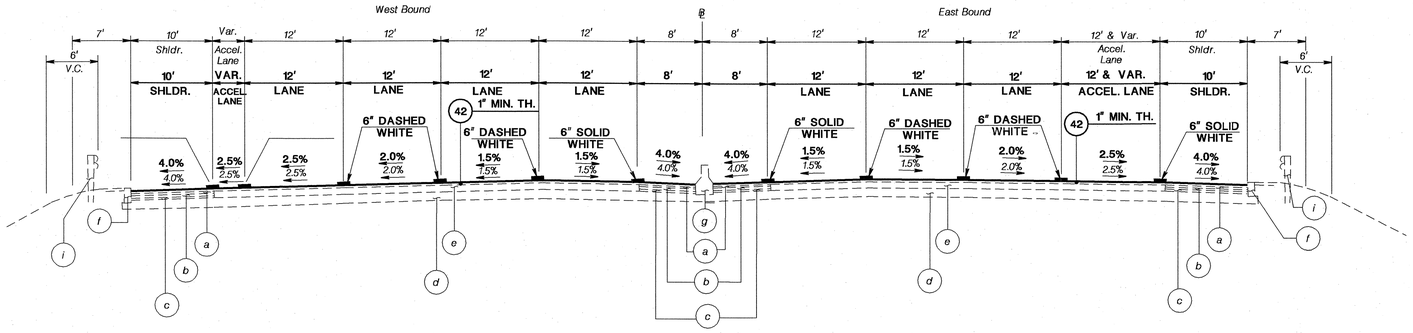
STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)



ROUTE I–280 NORMAL SECTION

STA. 334+00

N.T.S.



ROUTE I–280 NORMAL SECTION

STA. 354+00 TO STA. 364+50

N.T.S.

NOTE: REVEAL AT MEDIAN BARRIER CURB WILL BE 2" MIN. & VAR.

Existing Materials	
Item No.	***Description***
a	*Pavement Type FA-BC1*
b	*Bituminous Stabilized Base Course*
c	*Quarry- Processed Stone Subbase*
d	*Subbase*
e	*Concrete Surface Pavement Reinforced*
f	*9" x 20" White Concrete Vertical Curb*
g	*27" x 41" White Concrete Barrier Curb*
h	*15" x 41" White Concrete Barrier Curb*
i	*Beam Guide Rail*

PROPOSED MATERIALS		
PAY ITEM NO.	**STD. ITEM NO.**	**DESCRIPTION**
42	N4F03	BONDED MODIFIED OPEN GRADED FRICTION COURSE MIX I-3

TS-2 / TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE I-280

CONTRACT NO. 006053070

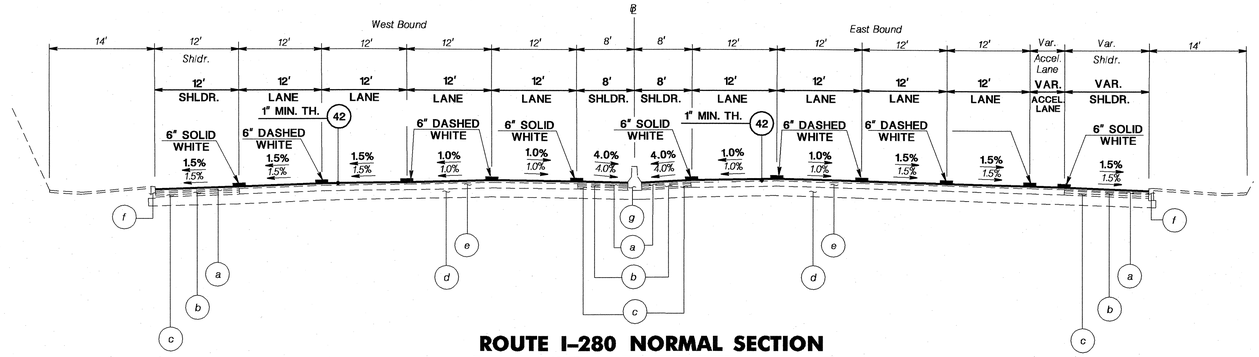
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N.J.	IM-280-6(100)

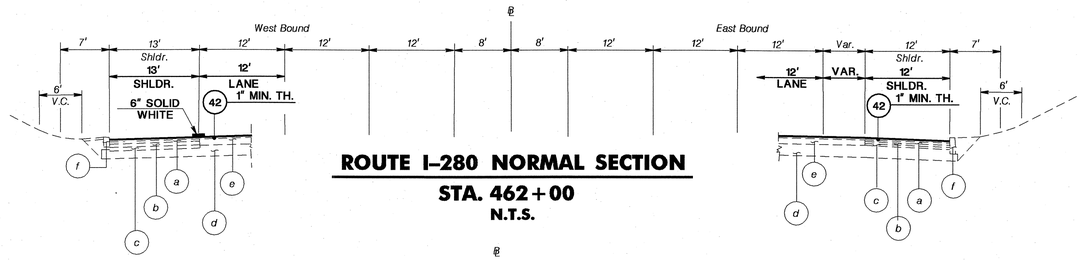


ROUTE I–280 NORMAL SECTION

STA. 403+00

N.T.S.

Existing Materials	
Item No.	*Description*
a	*Pavement Type FA-BC1*
b	*Bituminous Stabilized Base Course*
c	*Quarry-Processed Stone Subbase*
d	*Subbase*
e	*Concrete Surface Pavement Reinforced*
f	*9" x 20" White Concrete Vertical Curb*
g	*White Concrete Barrier Curb*
h	*15" x 41" White Concrete Barrier Curb*

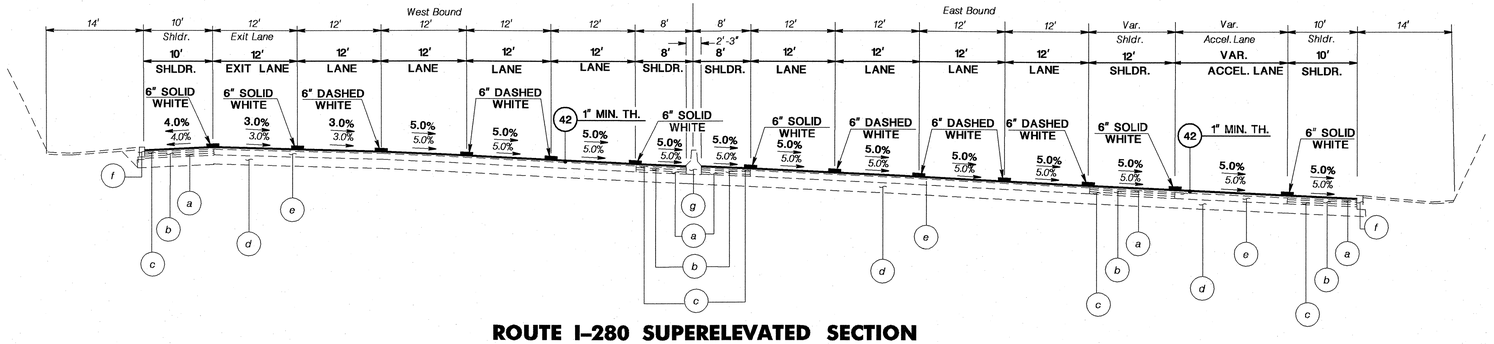


ROUTE I–280 NORMAL SECTION

STA. 462+00

N.T.S.

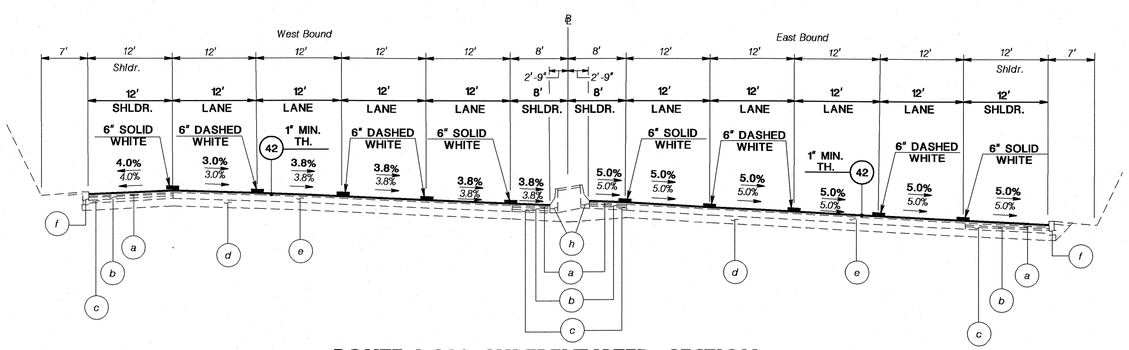
PROPOSED MATERIALS		
PAY ITEM NO.	STD. ITEM NO.	DESCRIPTION
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ROUTE I–280 SUPERELEVATED SECTION

STA. 393+00 (5% MAX.) N.T.S.

NOTE: REVEAL AT MEDIAN BARRIER CURB WILL BE 2" MIN. & VAR.



ROUTE I–280 SUPERELEVATED SECTION

(5% MAX.)

N.T.S.

TS-3 / TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE I-280

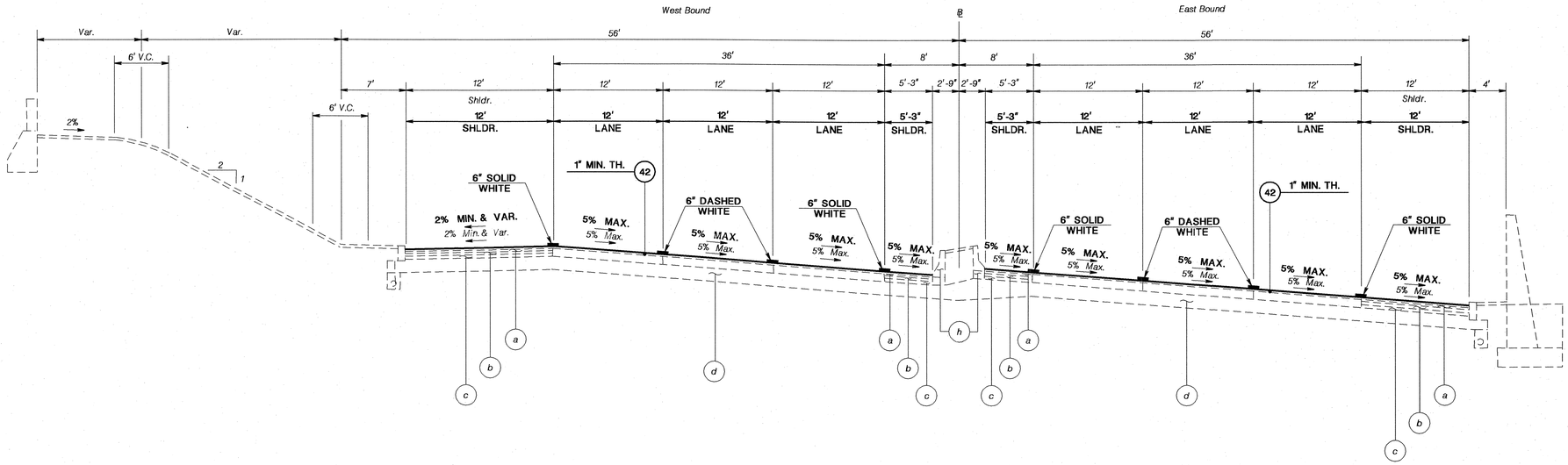
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NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)



SUPERELEVATED SECTION
VICINITY STA. 506+00
N.T.S.

Existing Materials	
Item No.	*Description*
a	Pavement Type FA-BC1, 2" Th.
b	Bituminous Stabilized Base Course
c	Quarry- Processed Stone Subbase
d	Subbase
e	Concrete Surface Pavement Reinforced, 9" Th.
f	9" x 20" White Concrete Vertical Curb
g	27" x 41" White Concrete Barrier Curb
h	15" x 41" White Concrete Barrier Curb
i	Beam Guide Rail

PROPOSED MATERIALS		
PAY ITEM NO.	STD. ITEM NO.	DESCRIPTION
42	N4F03	BONDED MODIFIED OPEN GRADED FRICTION COURSE MIX I-3

NOTE: REVEAL AT MEDIAN BARRIER CURB WILL BE 2" MIN. & VAR.

TS-4 / TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE I-280

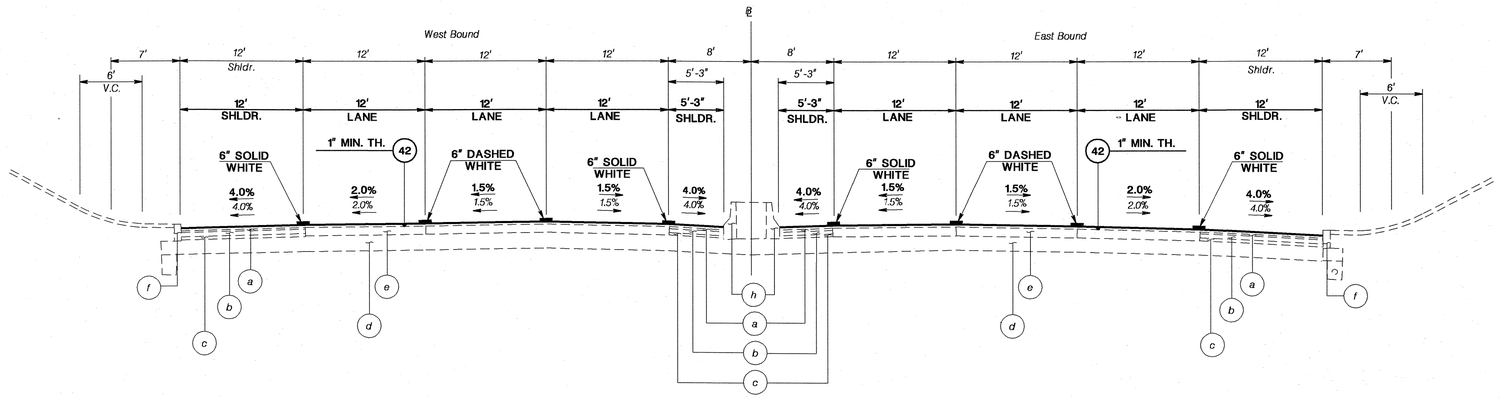
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NJDOT Design Services

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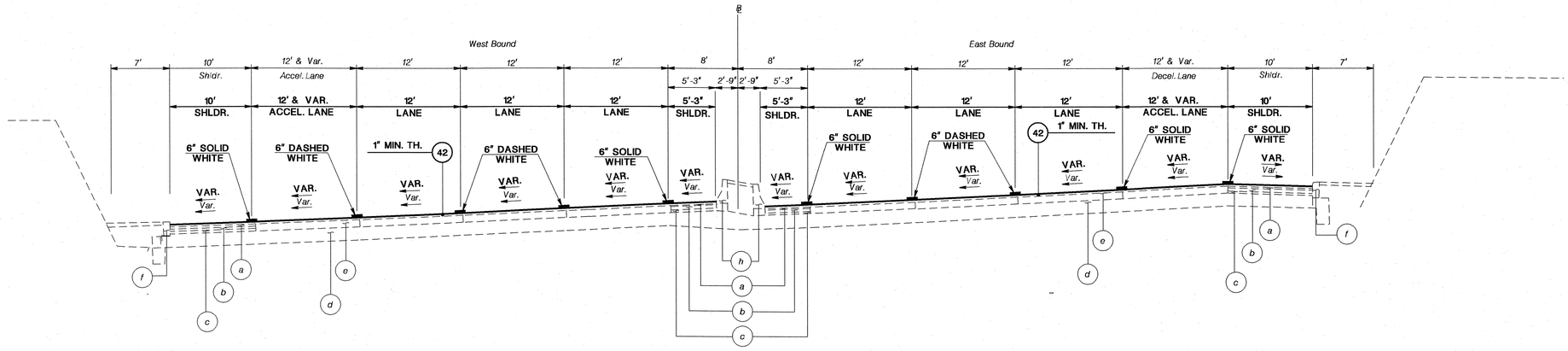
STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)



ROUTE I-280 NORMAL SECTION

VICINITY STA. 518+00

N.T.S.



ROUTE I-280 SUPERELEVATED SECTION

VICINITY STA. 494+00

N.T.S.

NOTE: REVEAL AT MEDIAN BARRIER CURB WILL BE 2" MIN. & VAR.

Existing Materials	
Item No.	***Description***
a	*Pavement Type FA-BC1, 2" Th.*
b	*Bituminous Stabilized Base Course*
c	*Quarry- Processed Stone Subbase*
d	*Subbase*
e	*Concrete Surface Pavement Reinforced, 9" Th.*
f	*9" x 20" White Concrete Vertical Curb*
g	*27" x 41" White Concrete Barrier Curb*
h	*15" x 41" White Concrete Barrier Curb*
i	*Beam Guide Rail*

PROPOSED MATERIALS		
PAY ITEM NO.	**STD. ITEM NO.**	**DESCRIPTION**
42	N4F03	BONDED MODIFIED OPEN GRADED FRICTION COURSE MIX I-3

TS-5 / TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

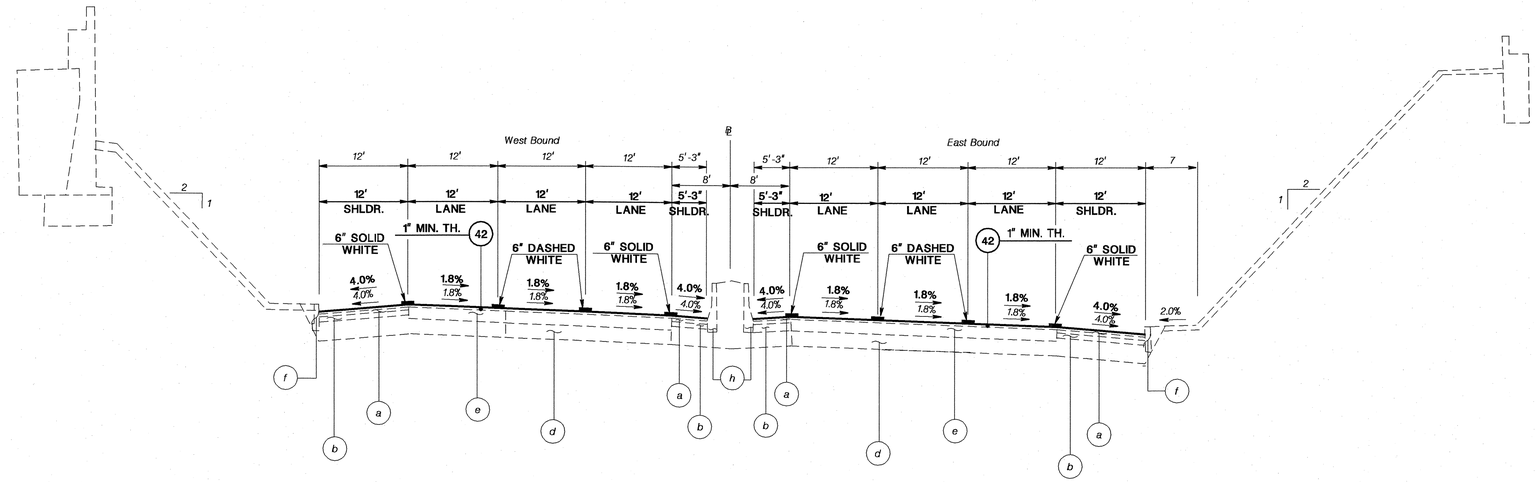
ROUTE I-280

CONTRACT NO. 006053070

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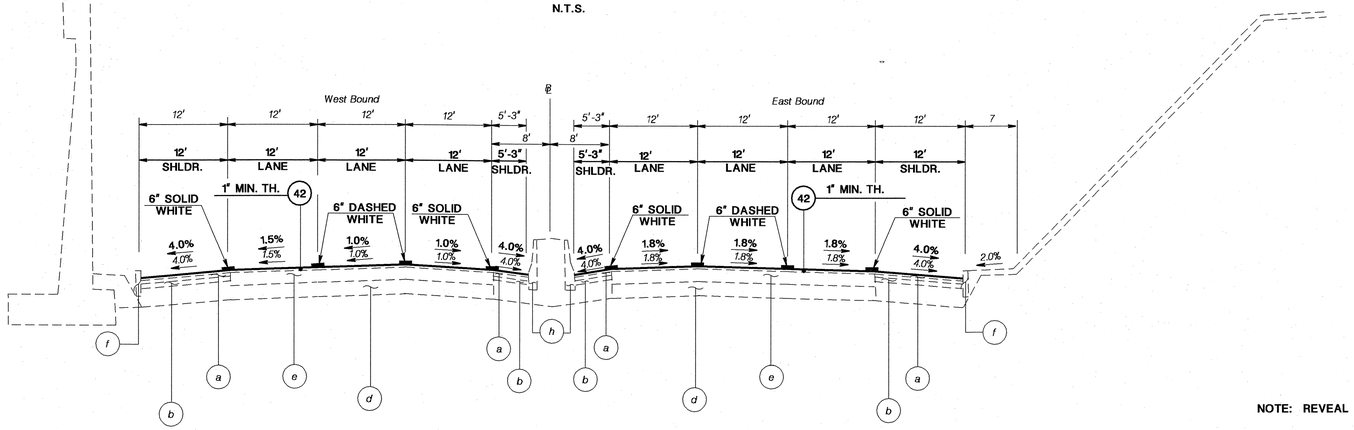
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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)



SUPERELEVATED SECTION
VICINITY STA. 543+00

N.T.S.



NOTE: REVEAL AT MEDIAN BARRIER CURB WILL BE 2" MIN. & VAR.

NORMAL SECTION
VICINITY STA. 551+00

Existing Materials	
Item No.	***Description***
a	*Pavement Type FA-BCt, 2" Th.*
b	*Bituminous Stabilized Base Course*
c	*Quarry- Processed Stone Subbase*
d	*Subbase*
e	*Concrete Surface Pavement Reinforced, 9" Th.*
f	*9" x 20" White Concrete Vertical Curb*
g	*27" x 41" White Concrete Barrier Curb*
h	*15" x 41" White Concrete Barrier Curb*
i	*Beam Guide Rail*

PROPOSED MATERIALS		
PAY ITEM NO.	**STD. ITEM NO.**	**DESCRIPTION**
42	N4F03	BONDED MODIFIED OPEN GRADED FRICTION COURSE MIX I-3

TS-6
TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE I-280

CONTRACT NO. 006053070

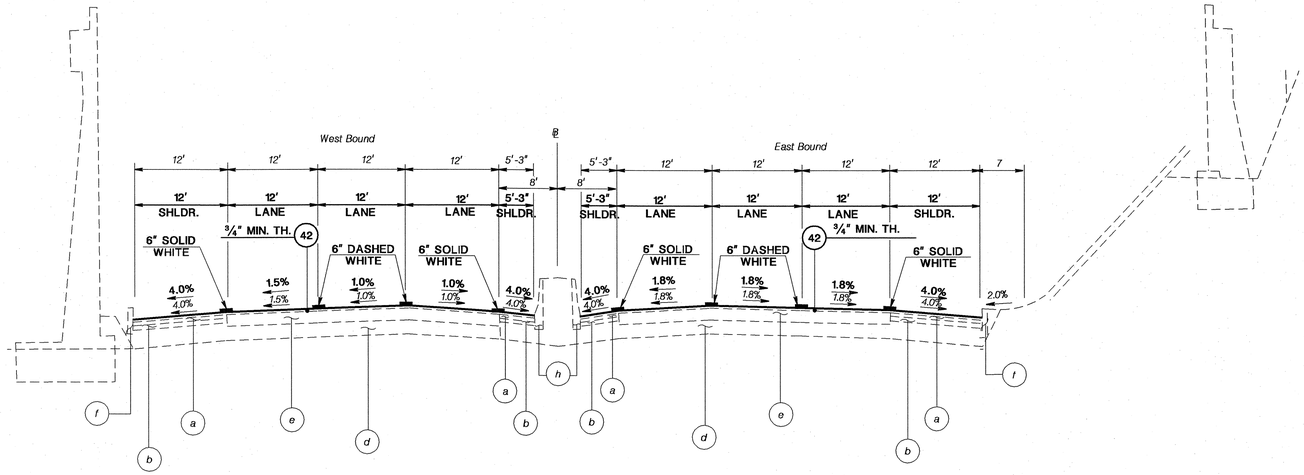
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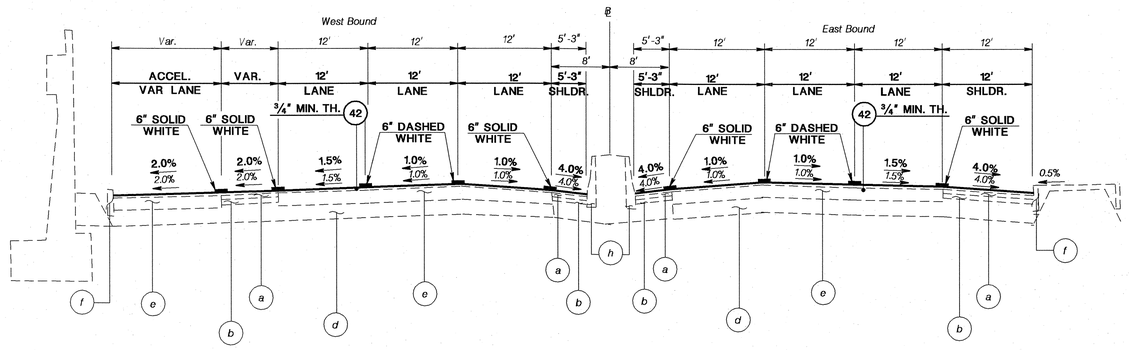
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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)



NORMAL SECTION
VICINITY STA. 560+50

N.T.S.



NORMAL SECTION
VICINITY STA. 571+00

N.T.S.

NOTE: REVEAL AT MEDIAN BARRIER CURB WILL BE 2" MIN. & VAR.

Existing Materials	
Item No.	***Description***
a	*Pavement Type FA-BC1, 2" Th.*
b	*Bituminous Stabilized Base Course*
c	*Quarry- Processed Stone Subbase*
d	*Subbase*
e	*Concrete Surface Pavement Reinforced, 9" Th.*
f	*9" x 20" White Concrete Vertical Curb*
g	*27" x 41" White Concrete Barrier Curb*
h	*15" x 41" White Concrete Barrier Curb*
i	*Beam Guide Rail*

PROPOSED MATERIALS		
PAY ITEM NO.	**STD. ITEM NO.**	**DESCRIPTION**
42	N4F03	BONDED MODIFIED OPEN GRADED FRICTION COURSE MIX I-3

TS-7 / TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE I-280

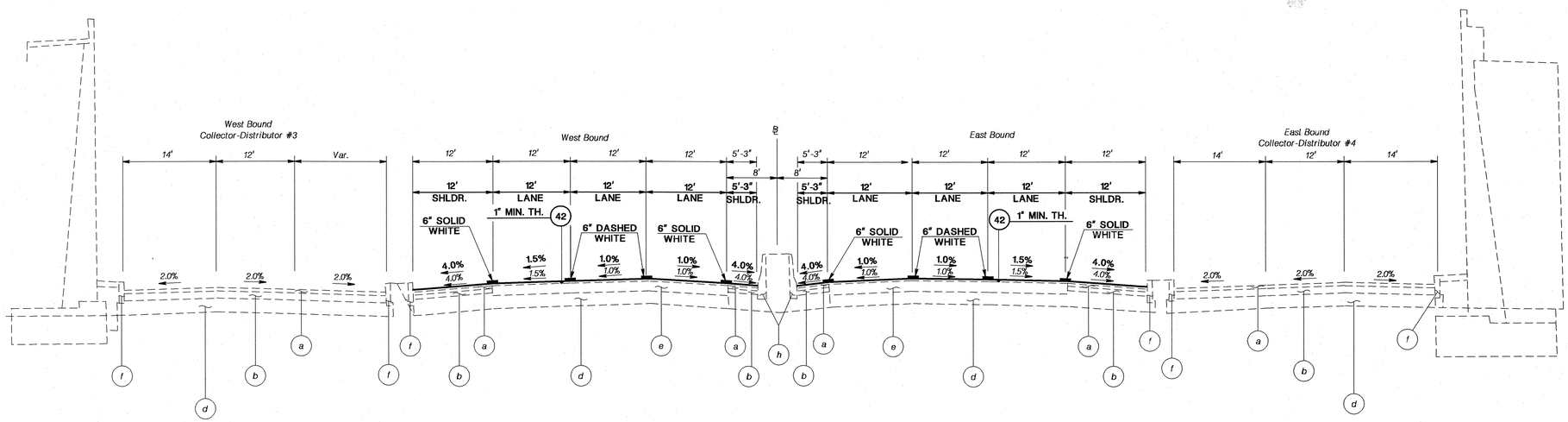
CONTRACT NO. 006053070

11

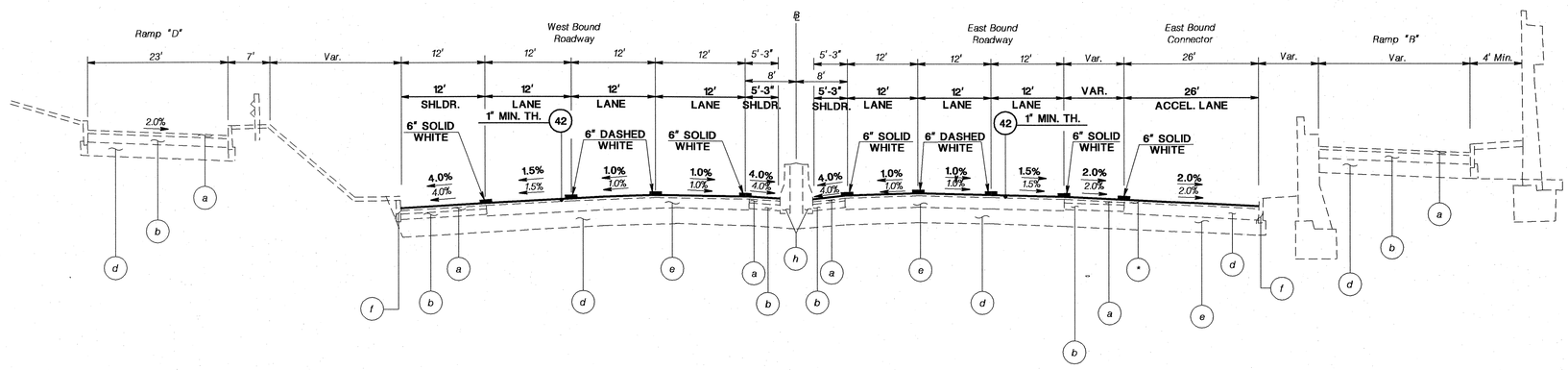
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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)



NORMAL SECTION
VICINITY STA. 578+00
N.T.S.



NORMAL SECTION
VICINITY STA. 589+00
N.T.S.

NOTE: REVEAL AT MEDIAN BARRIER CURB WILL BE 2" MIN. & VAR.

Existing Materials	
Item No.	***Description***
a	*Pavement Type FA-BCT, 2" Th.*
b	*Bituminous Stabilized Base Course*
c	*Quarry- Processed Stone Subbase*
d	*Subbase*
e	*Concrete Surface Pavement Reinforced, 9" Th.*
f	*9" x 20" White Concrete Vertical Curb*
g	*27" x 41" White Concrete Barrier Curb*
h	*15" x 41" White Concrete Barrier Curb*
i	*Beam Guide Rail*

PROPOSED MATERIALS		
PAY ITEM NO.	**STD. ITEM NO.**	**DESCRIPTION**
42	N4F03	MODIFIED OPEN GRADED FRICTION COURSE - 3

TS-8 / TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE I-280

CONTRACT NO. 006053070

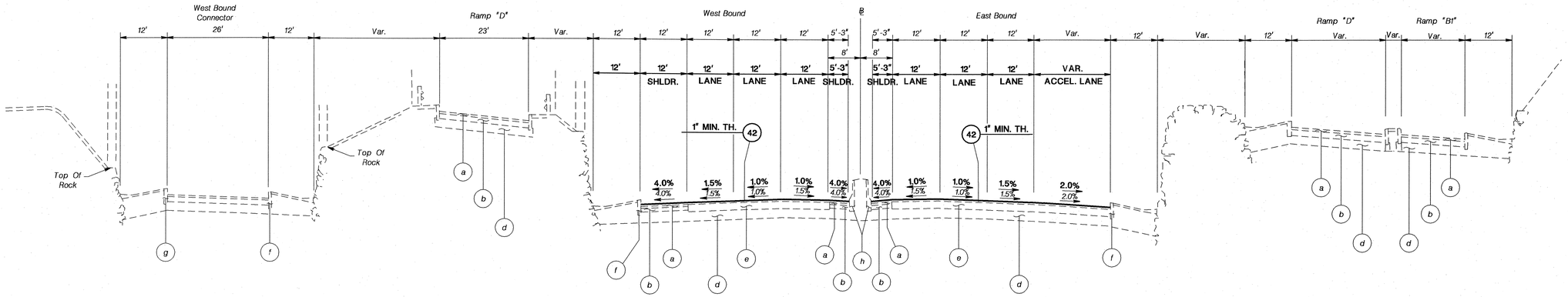
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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)



NORMAL SECTION
VICINITY STA. 591+50 LEFT
STA. 592+50 RIGHT
N.T.S.

NOTE: REVEAL AT MEDIAN BARRIER CURB WILL BE 2" MIN. & VAR.

Existing Materials	
Item No.	***Description***
a	*Pavement Type I-A-BC1, 2" Th.*
b	*Bituminous Stabilized Base Course*
c	*Quarry-Processed Stone Subbase*
d	*Subbase*
e	*Concrete Surface Pavement Reinforced, 9" Th.*
f	*9" x 20" White Concrete Vertical Curb*
g	*27" x 41" White Concrete Barrier Curb*
h	*15" x 41" White Concrete Barrier Curb*
i	*Beam Guide Rail*

PROPOSED MATERIALS		
PAY ITEM NO.	**STD. ITEM NO.**	**DESCRIPTION**
42	N4F03	BONDED MODIFIED OPEN GRADED FRICTION COURSE MIX I-3

TS-9 / TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

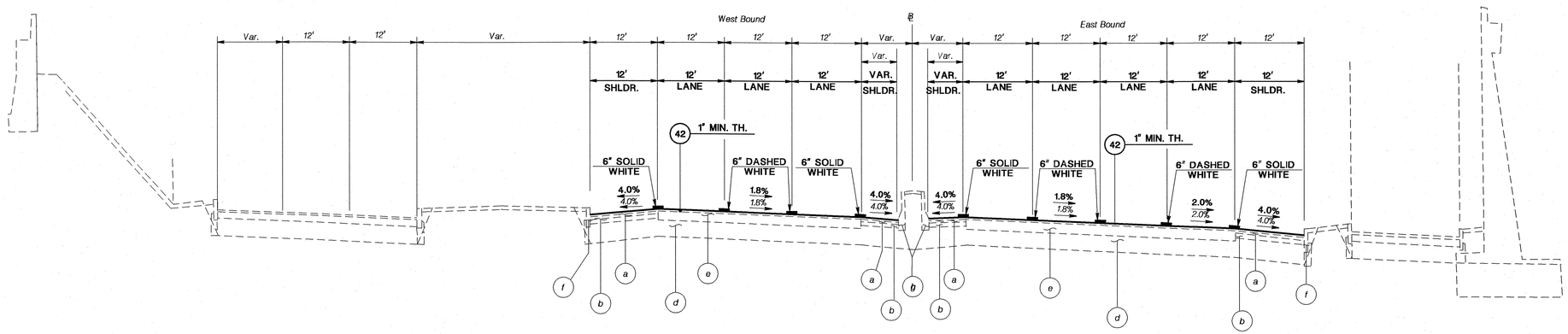
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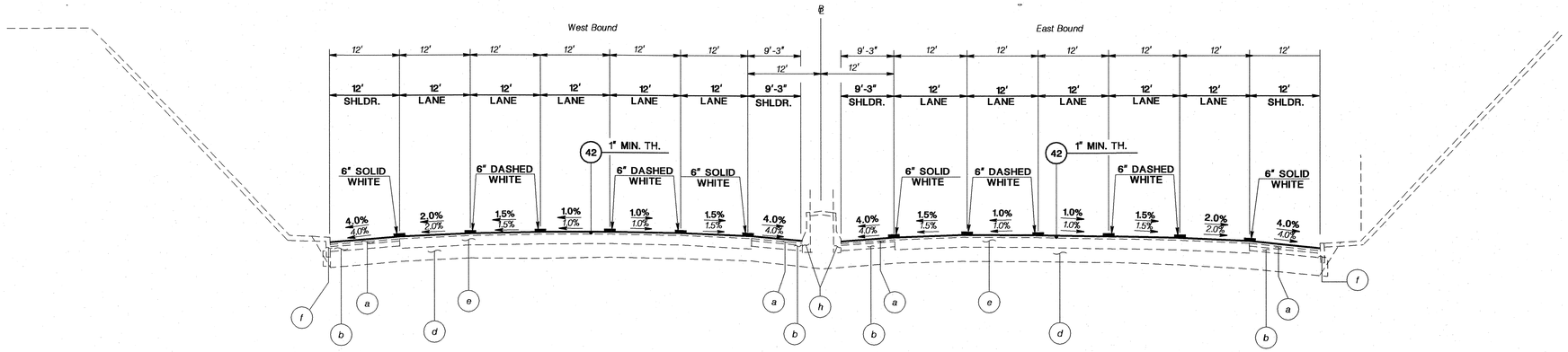
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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)



SUPERELEVATED SECTION
VICINITY STA. 600+00



NORMAL SECTION
VICINITY STA. 612+00

NOTE: REVEAL AT MEDIAN BARRIER CURB WILL BE 2" MIN. & VAR.

Existing Materials	
Item No.	***Description***
a	Pavement Type FA-BC1, 2" Th.
b	Bituminous Stabilized Base Course
c	Quarry- Processed Stone Subbase
d	Subbase
e	Concrete Surface Pavement Reinforced, 9" Th.
f	9" x 20" White Concrete Vertical Curb
g	27" x 41" White Concrete Barrier Curb
h	15" x 41" White Concrete Barrier Curb
i	Beam Guide Rail

PROPOSED MATERIALS		
PAY ITEM NO.	**STD. ITEM NO.**	**DESCRIPTION**
42	N4F03	MODIFIED OPEN GRADED FRICTION COURSE - 3

TS-10 / TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE I-280

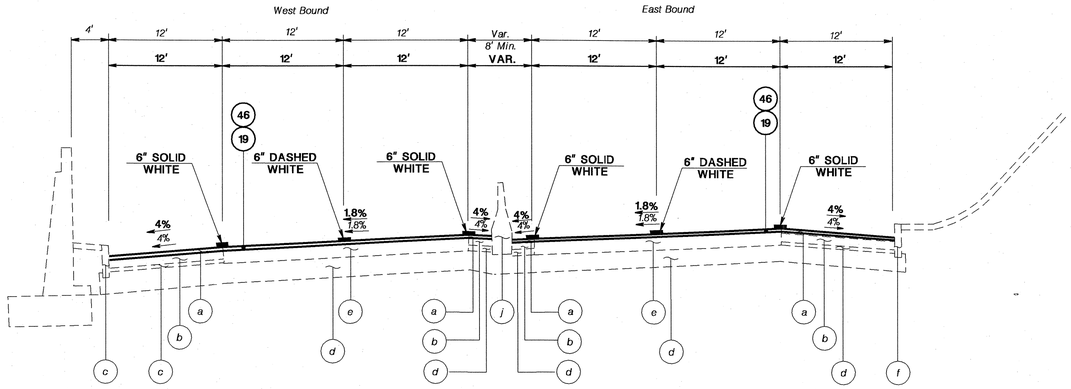
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14

NJDOT Design Services

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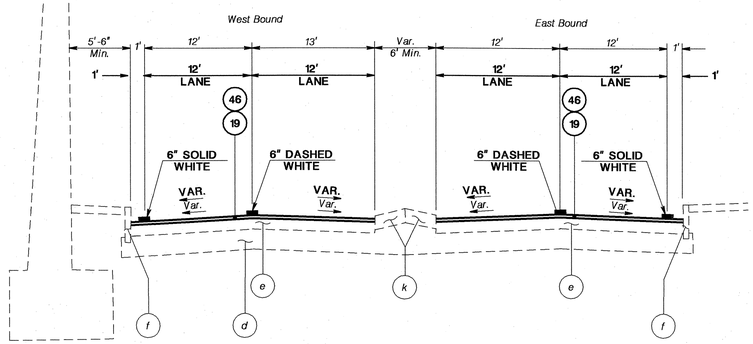
STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)



ROUTE I-280 SUPERELEVATED SECTION
VICINITY W.B. STA. 665+50
N.T.S.

Existing Materials	
Item No.	Description
a	Pavement Type FA-BC1
b	Bituminous Stabilized Base Course
c	Quarry- Processed Stone Subbase
d	Subbase
e	Concrete Surface Pavement Reinforced
f	9" x 20" White Concrete Vertical Curb
g	27" x 41" White Concrete Barrier Curb
h	15" x 41" White Concrete Barrier Curb
i	Beam Guide Rail
j	24" x Var. White Concrete Barrier Curb
k	36" x 8" White Concrete Sloping Curb

PROPOSED MATERIALS		
PAY ITEM NO.	STD. ITEM NO.	DESCRIPTION
19	2B25N	MILLING, 2" VARIABLE DEPTH
46	N5A02	BRIDGE DECK WATERPROOF SURFACE COURSE



ROUTE I-280 NORMAL SECTION
VICINITY W.B. STA. 668+50
N.T.S.

NOTE: REVEAL AT MEDIAN BARRIER CURB WILL BE 2" MIN. & VAR.

TS-11 / TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE I-280

CONTRACT NO. 006053070

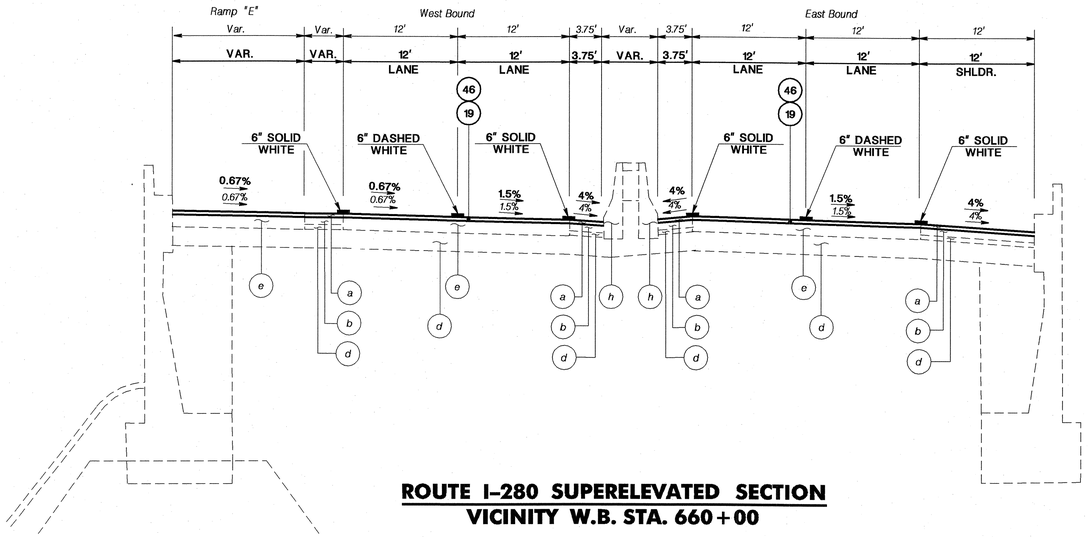
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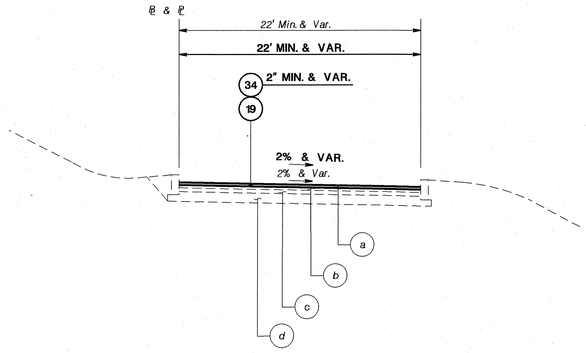
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N.J.	IM-280-6(100)



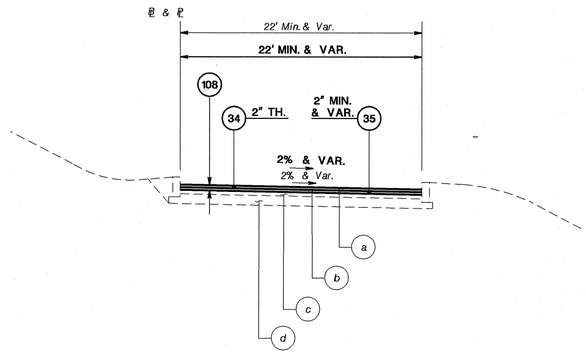
ROUTE I-280 SUPERELEVATED SECTION
VICINITY W.B. STA. 660+00
N.T.S.

Existing Materials	
Item No.	***Description***
a	*Pavement Type FA-BC1*
b	*Bituminous Stabilized Base Course*
c	*Quarry- Processed Stone Subbase*
d	*Subbase*
e	*Concrete Surface Pavement Reinforced*
f	*9" x 20" White Concrete Vertical Curb*
g	*27" x 41" White Concrete Barrier Curb*
h	*15" x 41" White Concrete Barrier Curb*
i	*Beam Guide Rail*
j	*24" x Var. White Concrete Barrier Curb*
k	*36" x 8" White Concrete Sloping Curb*

PROPOSED MATERIALS		
PAY ITEM NO.	**STD. ITEM NO.**	**DESCRIPTION**
19	2B25N	MILLING, 2" VARIABLE DEPTH
34	4F02A	SUPERPAVE HOT MIX ASPHALT 12.5H76 SURFACE COURSE
35	N4F03	SUPERPAVE HOT MIX ASPHALT 12.5H76 INTERMEDIATE COURSE
46	N5A02	BRIDGE DECK WATERPROOF SURFACE COURSE
108	2B50N	MILLING, 4" VARIABLE DEPTH



TYPICAL RAMP SECTION
N.T.S.



TYPICAL RAMP SECTION
N.T.S.

NOTE:
MILLING 4" & VAR., PLEASE REFER TO CONSTRUCTION PLANS C-8 & C-11.

NOTE: REVEAL AT MEDIAN BARRIER CURB WILL BE 2" MIN. & VAR.

TS-12 / TS-12

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE I-280

CONTRACT NO. 006053070

16

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

CITY OF NEWARK

COUNTY OF ESSEX

N.J. Plane Coordinate System

MATCH LINE ℄ STA. 631+00
PLAN SHEET NO. C-28

MATCH LINE W.B. ℄ STA. 646+00
PLAN SHEET NO. C-30

MATCH LINE E.B. ℄ STA. 645+00
PLAN SHEET NO. C-30

Rte. I-280 ℄ P.O.C. Sta .632+01.390 = Myrtle Ave. ℄ P.O.T. Sta.10+00.000

℄ P.C.C. Sta. 631+85.730

341 TONS (42) 3/4" TH. 7898 S.Y. (18)
STA. 631+00.000 TO STA. 639+44.343

W.B. ℄ P.O.B. Sta. 633+65.730

S81°19' 45.960"E

℄ P.C.C. Sta. 632+65.730

℄ P.T. Sta. 633+65.730

E.B. ℄ P.C.C. Sta. 634+70.970

Rte. I-280 E.B. P.O.B. STA. 633+65.730

℄ P.C. Sta. 633+70.970

Myrtle Avenue

Roseville Avenue

P.I. Rte. I-280 ℄ Sta. 634+73.480 = Roseville Ave. ℄ Sta. 10+00.000

W.B. ℄ P.C.C. Sta. 636+70.770

Rte. I-280 W.B. ℄

℄ P.C.C. Sta. 637+13.200

℄ P.C. Sta. 635+13.200

℄ P.C.C. Sta. 636+13.200

E.B. ℄ P.C.C. Sta. 635+70.970

Collector Road

7th Street

W.B. ℄ P.C.C. Sta. 637+70.770

W.B. ℄ P.C.C. Sta. 638+50.770

Rte. I-280 ℄ P.O.C. Sta. 637+40.310 = 7th Street ℄ P.O.T. Sta. 10+00.000

Rte. I-280 E.B. ℄

E.B. ℄ P.C.C. Sta. 639+38.450

6th Street

L.O.M.
L.O.P.

+44.34

+39.312

60 L.F. (17)

2 UNITS (49) 2 UNITS (22)

134 TONS (34) 2" TH. & VAR. 1164 S.Y. (19)
STA. 640+53.156 TO STA. 644+65.620

Ramp "B"

W.B. ℄ P.C.C. Sta. 642+39.660

Route I-280 W.B.

Rte. I-280 ℄ P.O.C. Sta. 639+96.740 = 6th Street ℄ P.O.T. Sta. 10+00.000

Route 75 N.To W.

Route 75 E.To S.

E.B. ℄ P.C.C. Sta. 640+38.450

E.B. ℄ P.T. Sta. 641+38.450

Route I-280 E.B.

E.B. ℄ P.C. Sta. 642+11.770

E.B. ℄ P.C.C. Sta. 643+11.770

E.B. ℄ P.C.C. Sta. 643+91.770

S63°16' 55.296"E

357 TONS (46) 2" TH. & VAR. 3105 S.Y. (19)
STA. 639+44.343 TO STA. 646+00.000

W.B. ℄ P.C.C. Sta. 644+39.660

W.B. ℄ P.O.E. Sta. 645+58.420

W.B. ℄ P.T. Sta. 645+39.660

W.B. ℄ P.C.C. Sta. 643+59.660

1 UNIT (49) 1 UNIT (22)

Ramp "D"

STA. 631+00.000 TO STA. 638+39.312
(18) 7005 S.Y.
(42) 302 TONS 3/4" TH.

STA. 638+39.312 TO STA. 645+00.000
(19) 2968 S.Y.
(46) 341 TONS 2" TH. & VAR.

STA. 642+76.014 TO STA. 645+00.000
(19) 532 S.Y.
(34) 61 TONS 2" TH. & VAR.

50' 0 50' 100'

C-29 / C-33

PAY ITEM NO.	STD. ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
17	2B50G	SAWCUTTING	60 LF
18	N2B08	MILLING, 3/4" VARIABLE DEPTH	14903 SY
19	2B25N	MILLING, 2" VARIABLE DEPTH	7769 SY
22	2L22C	INLET FILTERS	22 U
34	4F02A	SUPERPAVE HOT MIX ASPHALT 12.5H76 SURFACE COURSE	195
38	N4E02	SLAB STABILIZATION POLYURETHANE GROUT	1080 LBS
39	N4E03	PARTIAL DEPTH CONCRETE PAVEMENT PATCH	107 SF
40	N4E04	FULL DEPTH REINFORCED CONCRETE PAVEMENT REPAIR, PRECAST SYSTEM	504 SF
42	N4F01	BONDED MODIFIED OPEN GRADED FRICTION COURSE, MIX I-3	643 T
46	N5A02	BRIDGE DECK WATERPROOF SURFACE COURSE	698 T
49	6C62H	BICYCLE SAFE GRATES	22 U

NOTES:

1. FOR QUANTITIES AND LOCATIONS OF PAVEMENT REPAIR ITEMS REFER TO SHEET PR-31.
2. CONCRETE BARRIER CURB REPAIR (PAY ITEM #111) @ STA. 641+00 E.B. +/- IS TO BE PAID UNDER LUMP SUM. (SEE CONSTRUCTION DETAIL SHEET CD-4.)

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLANS

ROUTE I-280

CONTRACT NO. 006053070

46

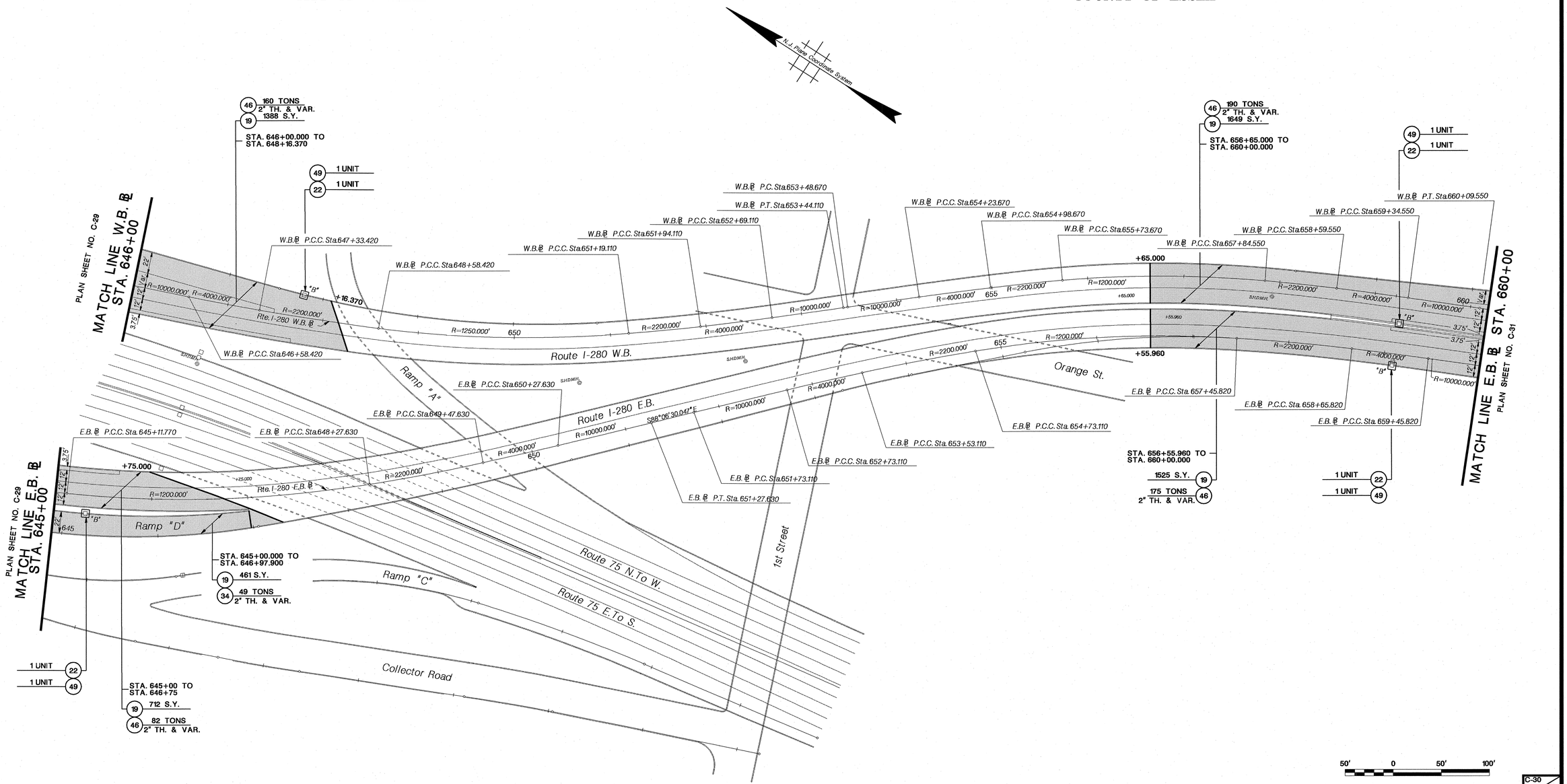
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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

CITY OF NEWARK

COUNTY OF ESSEX



PAY ITEM NO.	STD. ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
19	2B25N	MILLING, 2" VARIABLE DEPTH	5735 SY
22	2L22C	INLET FILTERS	4 U
34	4F02A	SUPERPAVE HOT MIX ASPHALT 12.5H76 SURFACE COURSE	53
38	N4E02	SLAB STABILIZATION POLYURETHANE GROUT	432 LBS
46	N5A02	BRIDGE DECK WATERPROOF SURFACE COURSE	607 T
49	6C62H	BICYCLE SAFE GRATES	4 U

NOTE:

1. FOR QUANTITIES AND LOCATIONS OF PAVEMENT REPAIR ITEMS REFER TO SHEET PR-32.

C-30
C-33

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLANS

ROUTE I-280

CONTRACT NO. 006053070

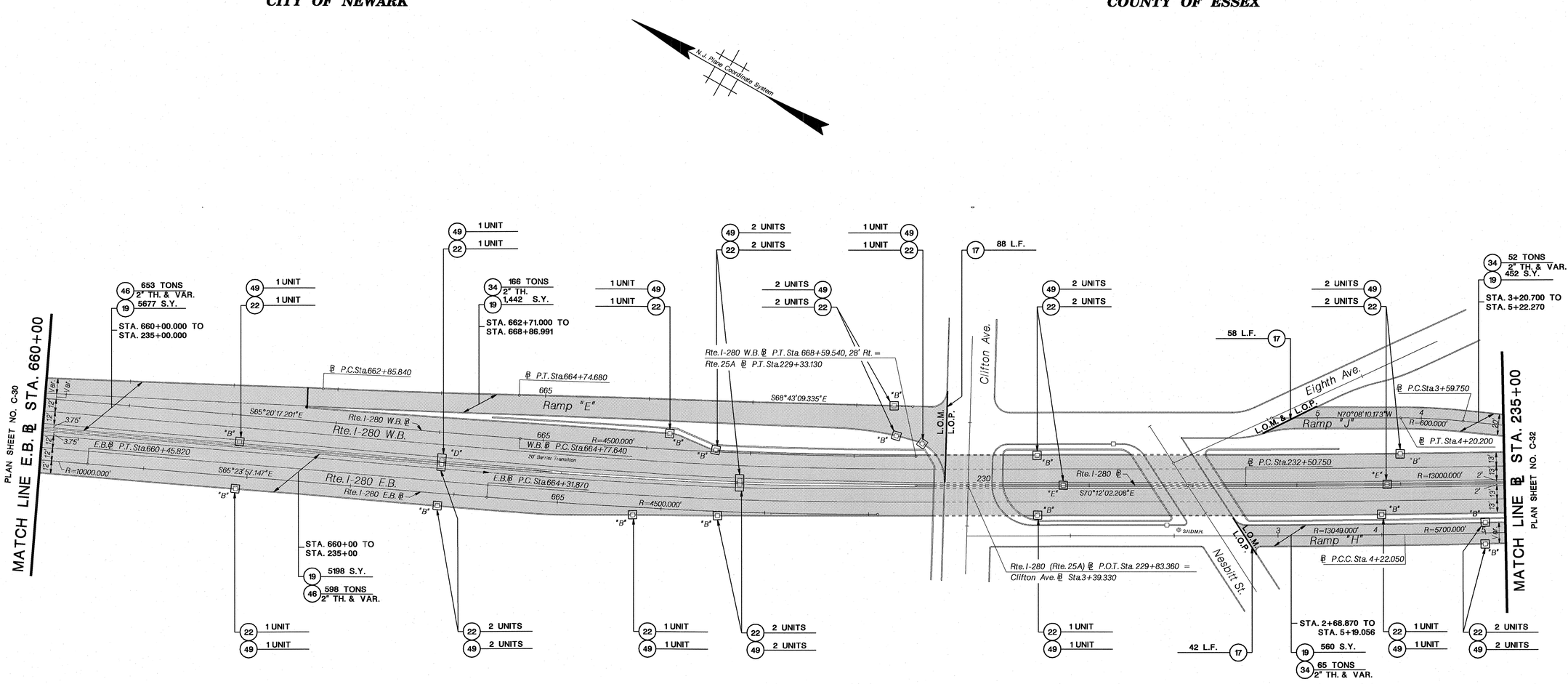
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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

CITY OF NEWARK **COUNTY OF ESSEX**



50' 0 50' 100'

C-31 / C-33

PAY ITEM NO.	STD. ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
17	2B50G	SAWCUTTING	188 LF
19	2B25N	MILLING, 2" VARIABLE DEPTH	13329 SY
22	2L22C	INLET FILTERS	19 U
34	4F02A	SUPERPAVE HOT MIX ASPHALT 12.5H76 SURFACE COURSE	283
38	N4E02	SLAB STABILIZATION POLYURETHANE GROUT	648 LBS
46	N5A02	BRIDGE DECK WATERPROOF SURFACE COURSE	1251 T
49	6C62H	BICYCLE SAFE GRATES	19 U

NOTE:

1. FOR QUANTITIES AND LOCATIONS OF PAVEMENT REPAIR ITEMS REFER TO SHEET PR-33.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLANS

ROUTE I-280

CONTRACT NO. 006053070

48

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 WB			Slab Stabilization, Polyurethane Grout			
Pay Item No.			Quantity per Lane (Unit)	0	0	0
			Quantity per Lane* (Unit)	4	4	4
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
0	12	C-2				

*"If and Where Directed" Estimated Quantity

NOTE: FOR ALL PAVEMENT REPAIR TABLES LANE 1 IS REFERING TO THE LEFT LANE (FAST LANE) CLOSEST TO THE CENTER MEDIAN. LANES 2, 3, 4, & 5 ARE REFERING TO THE ADJACENT LANES IMMEDIATELY TO THE RIGHT OF LANE 1 IN THEIR RESPECTIVE ORDER.

PR-1
PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB			Slab Stabilization, Polyurethane Grout			
Pay Item No. 38			Quantity per Lane (Unit)	1	1	2
			Quantity per Lane* (Unit)	4	4	4
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
4	12	C-3	360+56			X
			361+39			X
			361+49		X	
			362+90	X		

*"If and Where Directed" Estimated Quantity

I-280 EB			Partial Depth Concrete Pavement Patch								
Pay Item No. 39			Quantity per Lane (SF)	3			10			0	
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2"			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
13	C-3	361+84				2	5	10			
		361+86	3	1	3						

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NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB			Slab Stabilization, Polyurethane Grout			
Pay Item No. 38			Quantity per Lane (Unit)	2	7	7
			Quantity per Lane* (Unit)	19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
16	57	C-4	363+29		X	
			366+26		X	
			367+53			X
			367+67			X
			367+70			X
			367+73		X	
			367+78	X		
			367+84			X
			368+88			X
			371+60			X
			371+81		X	
			371+89	X		
			372+42		X	
			374+00		X	
			374+65		X	
			376+70			X

I-280 WB			Slab Stabilization, Polyurethane Grout			
Pay Item No. 38			Quantity per Lane (Unit)	1	0	8
			Quantity per Lane* (Unit)	19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
9	57	C-4	377+79	X		X
			376+54			X
			375+45			X
			374+67			X
			373+89			X
			373+11			X
			365+29			X
			363+73			X

I-280 EB			Partial Depth Concrete Pavement Patch								
Pay Item No. 39			Quantity per Lane (SF)	0			0			456	
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
456	C-4	376+48							38	12	456

*"If and Where Directed" Estimated Quantity

NJDOT Design Services

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NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

53

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB			Slab Stabilization, Polyurethane Grout			
Pay Item No. 38			Quantity per Lane (Unit)	4	4	6
			Quantity per Lane* (Unit)	37	37	37
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
14	111	C-5	378+24			X
			379+77			X
			382+08	X		
			382+10		X	
			384+74	X		
			385+27			X
			386+04			X
			386+81			X
			389+17	X		
			395+49	X		
			395+49		X	
			395+70		X	
			397+80		X	
			400+14			X

I-280 EB			Partial Depth Concrete Pavement Patch									
Pay Item No. 39			Quantity per Lane (SF)	28			8			64		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
100	C-5	382+91							2	2	4
		382+91							2	3	6
		391+20							6	3	18
		391+25							4	5	20
		394+14	4	3	12						
		394+70	4	2	8						
		394+88							3	2	6
		394+95							2	2	4
		400+00				4	2	8			
		401+86							3	2	6
		402+71	4	2	8						

I-280 EB			Full Depth Reinforced Concrete Pavement Repair									
Pay Item No. 40			Quantity per Lane (SF)	0			72			312		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
384	C-5	384+76				6	12	72			
		395+48							26	12	312

I-280 WB			Slab Stabilization, Polyurethane Grout			
Pay Item No. 38			Quantity per Lane (Unit)	4	0	13
			Quantity per Lane* (Unit)	37	37	37
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
17	112	C-5	406+63			X
			406+61	X		
			405+82	X		
			405+06			X
			404+69			X
			402+72			X
			399+59			X
			398+31			X
			387+71			X
			386+41			X
			386+39	X		
			385+63			X
			384+85			X
			383+14	X		
			382+50			X
			380+15			X
			378+59			X

*"If and Where Directed" Estimated Quantity

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB			Slab Stabilization, Polyurethane Grout			
Pay Item No. 38			Quantity per Lane (Unit)	5	6	9
			Quantity per Lane* (Unit)	19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
20	57	C-6	410+75			X
			411+51	X		
			411+58		X	
			412+01			X
			412+20			X
			412+24	X		
			412+26		X	
			412+41			X
			412+46			X
			412+62			X
			413+86		X	
			413+95	X		
			415+53	X		
			416+03		X	
			416+76	X		
			417+73			X
			418+36		X	
			418+75			X
			332+34			X
			333+36		X	

I-280 EB			Partial Depth Concrete Pavement Patch									
Pay Item No. 39			Quantity per Lane (SF)	30			18			28		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
76	C-6	408+31				3	2	6			
		409+13							4	2	8
		415+94	6	4	24						
		416+26							5	4	20
		418+83				3	4	12			
		332+79	3	2	6						

I-280 EB			Full Depth Reinforced Concrete Pavement Repair									
Pay Item No. 40			Quantity per Lane (SF)	0			0			72		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
72	C-6	412+20							6	12	72

I-280 WB			Slab Stabilization, Polyurethane Grout			
Pay Item No. 38			Quantity per Lane (Unit)	4	8	12
			Quantity per Lane* (Unit)	19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
24	57	C-6	418+36			X
			417+58			X
			416+81			X
			416+03			X
			415+25			X
			414+46			X
			413+70		X	
			413+68			X
			412+90	X	X	
			412+12			X
			411+33		X	X
			410+55		X	
			409+76	X	X	
			408+99			X
			408+97	X	X	
			408+20			X
			408+19		X	
			407+42			X
			407+40	X		
			407+39		X	

**"If and Where Directed" Estimated Quantity

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NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB			Slab Stabilization, Polyurethane Grout			
Pay Item No. 38			Quantity per Lane (Unit)	6	6	8
			Quantity per Lane* (Unit)	19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
20	57	C-7	334+36			X
			334+94	X		
			335+65			X
			336+35	X		
			336+52		X	
			336+63			X
			337+59			X
			337+67			X
			337+91	X		
			338+06		X	
			340+49	X		
			340+62			X
			342+04			X
			343+73		X	
			343+80	X		
			345+44		X	
			346+21	X		
			346+91		X	
			348+00			X
			348+87		X	

I-280 WB			Slab Stabilization, Polyurethane Grout				
Pay Item No. 38			Quantity per Lane (Unit)	3	0	8	0
			Quantity per Lane* (Unit)	19	19	19	5
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4
11	62	C-7	342+64			X	
			342+45	X			
			341+57			X	
			341+40	X			
			341+20			X	
			337+30			X	
			337+24	X		X	
			335+62			X	
			334+83			X	
			334+04			X	

I-280 EB		Partial Depth Concrete Pavement Patch									
Pay Item No. 39		Quantity per Lane (SF)	61			12			36		
			Lane 1			Lane 2			Lane 3		
Quantity per Sheet (SF)	Sheet No.	Station	Length	Width	Size	Length	Width	Size	Length	Width	Size
109	C-7	338+07	2	7	14						
		338+07	6	2	12						
		338+56							3	2	6
		340+02	6	4	24						
		340+02	3	3	9						
		340+32							3	1	3
		340+39	1	2	2						
		345+26							3	3	9
		345+27							3	2	6
		347+67							3	4	12
		347+78				3	4	12			

I-280 EB		Full Depth Reinforced Concrete Pavement Repair									
Pay Item No. 40		Quantity per Lane (SF)	216			216			516		
			Lane 1			Lane 2			Lane 3		
Quantity per Sheet (SF)	Sheet No.	Station	Length	Width	Size	Length	Width	Size	Length	Width	Size
948	C-7	338+68				6	12	72			
		340+08				6	12	72			
		340+53	12	12	144						
		342+04							6	12	72
		342+31	6	12	72						
		342+34							6	12	72
		342+43				6	12	72			
		347+09							31	12	372

*"If and Where Directed" Estimated Quantity

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PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
			Quantity per Lane (Unit)	8	13	11	4	3
			Quantity per Lane* (Unit)	29	29	29	21	8
			349+13		X			
			349+91		X			
			351+54	X				
			351+82			X		
			352+29			X		
			353+15		X			
			354+46				X	
			354+54				X	
			354+71	X				
			354+74		X			
			355+91			X		
			357+17	X				
			357+18		X			
			357+44			X		
			358+50	X				
			358+60		X			
			358+67			X		
			359+33			X		
			360+31			X		
39	116	C-9	360+60			X		
			361+87		X			
			362+12			X		
			362+76			X		
			365+67					X
			366+54	X				
			366+85		X			
			367+02	X				
			367+17		X			
			367+39		X			
			367+46					X
			368+12	X				
			368+31		X			
			369+02					X
			369+24	X				
			369+68		X			
			370+44		X			
			370+64				X	
			371+07				X	
			371+11			X		

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
		Quantity per Lane (SF)	0			12			12			308			8		
		356+24										5	2	10			
		356+55										4	2	8			
		356+64										6	2	12			
		357+08										6	2	12			
		357+18										17	2	34			
		357+85										3	2	6			
		358+94										1	1	1			
		360+87										3	2	6			
		361+83										13	2	26			
		361+99										8	2	16			
		362+44										6	2	12			
		363+25										2	1	2			
		365+12										15	2	30			
		365+12										3	2	6			
		365+23										5	3	15			
		365+92							3	2	6						
		365+97							3	2	6						
		366+61										6	2	12			
340	C-9	366+83										8	2	16			
		367+14										3	2	6			
		367+41													2	1	2
		367+41													2	1	2
		367+61										2	1	2			
		367+91										2	1	2			
		368+54										1	2	2			
		368+79										3	2	6			
		368+89										7	2	14			
		369+17										2	1	2			
		369+29													1	1	1
		369+29													1	1	1
		369+40										2	1	2			
		369+53													1	1	1
		369+53													1	1	1
		369+53				4	3	12									
		369+56										5	2	10			
		369+81										10	2	20			
		371+17										5	2	10			
		371+42										4	2	8			

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
		Quantity per Lane (SF)	0			0			324			1548			120		
		355+91							8	12	96						
		359+32										6	12	72			
		360+25										45	12	540			
		363+82										52	12	624			
1992	C-9	364+58							6	12	72						
		365+76										20	12	240			
		366+03							6	12	72						
		367+71							7	12	84						
		369+29										6	12	72			
		370+85													10	12	120

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
			Quantity per Lane (Unit)	5	4	2	2	4
			Quantity per Lane* (Unit)	29	29	29	29	29
			370+84	X				
			370+71		X			
			368+02					X
			368+91					X
			368+60					X
			368+31					X
			363+01			X		
			362+19			X		
17	145	C-9	361+44	X				
			361+17		X			
			355+63				X	
			355+25	X				
			354+49		X			
			353+34		X			
			351+39	X				
			350+98				X	
			350+91	X				

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
		Quantity per Lane (SF)	0			0			10			4			67		
		371+28										2	1	2			
		369+01										2	1	2			
		368+77													1	2	2
		367+74													1	1	1
81	C-9	367+71													1	1	1
		367+30													1	1	1
		367+22													1	2	2
		367+21													30	2	60
		357+01							5	2	10						

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
		Quantity per Lane (SF)	0			0			0			288			72		
		371+13										6	12	72			
360	C-9	370+31										6	12	72			
		368+01													6	12	72
		353+27										12	12	144			

*"If and Where Directed" Estimated Quantity

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NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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NJDOT Design Services

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N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

			Quantity per Lane (Unit)	10	8	11	13	6
			Quantity per Lane* (Unit)	16	16	16	16	9
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
48	73	C-10	371+72	X				
			371+83					X
			372+15		X			
			372+22				X	
			372+22			X		
			372+80					X
			373+38			X		
			373+41				X	
			373+48			X		
			373+48	X				
			373+98		X			
			375+13	X				
			375+14				X	
			375+20			X		
			375+71		X			
			375+73				X	
			375+95	X				
			376+50	X				
			376+55		X			
			377+40			X		
			377+44					X
			378+85	X				
			379+21	X				
			379+26					X
			379+51		X			
			380+34				X	
			380+34					X
			380+42					X
			380+69				X	
			380+72	X				
			380+77			X		
			381+47		X			
			381+86				X	
			381+96				X	
			381+97			X		
			382+05				X	
			382+06			X		
			382+13				X	
			382+19			X		
			382+34	X				
			382+40			X		
			383+04				X	
			383+07		X			
			383+11			X		
			383+11				X	
			383+57				X	
			383+61	X				
			383+73		X			

*"If and Where Directed" Estimated Quantity

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

			Quantity per Lane (SF)	9			17			0			356			10		
				Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
392	C-10	371+94											4	2	8			
		372+61											4	2	8			
		373+32		3	3	9												
		373+74											1	1	1			
		373+86											4	2	8			
		374+11											4	3	12			
		374+24											4	3	12			
		374+24											4	2	8			
		374+37											4	2	8			
		374+40											2	1	2			
		374+42											3	2	6			
		374+49											2	3	6			
		374+49											2	2	4			
		374+65											4	2	8			
		375+04											2	2	4			
		375+08											4	2	8			
		375+77											4	2	8			
		376+21											2	1	2			
		376+47											2	1	2			
		376+70					4	2	8									
		376+72											2	2	4			
		376+97					3	3	9									
		377+89											1	2	2			
		378+48											6	4	24			
		378+64											5	2	10			
		378+76											6	1	6			
		378+76											3	2	6			
		378+82											18	2	36			
		378+87											2	1	2			
		378+92											1	1	1			
		379+02											8	3	24			
		379+12											2	1	2			
		379+17											3	2	6			
		379+17											2	1	2			
		379+29											2	3	6			
		379+55											3	2	6			
		379+87											2	2	4			
		379+96											4	1	4			
		380+05											1	2	2			
		380+08														1	1	1
		380+08														1	1	1
		380+42											3	2	6			
		380+55														2	2	4
		380+55											6	2	12			
		380+55														2	2	4
		381+29											5	2	10			
		381+36											4	2	8			
		381+43											1	2	2			
		381+63											6	2	12			
		382+66											5	4	20			
		383+17											4	2	8			
		383+51											3	2	6			
		383+88											5	2	10			

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

		Quantity per Lane (SF)	0			0			0			696			240		
			Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
936	C-10	376+87										52	12	624			
		380+77													20	12	240
		382+60										6	12	72			

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

				Quantity per Lane (Unit)	5	7	9	11	3
				Quantity per Lane* (Unit)	16	16	16	16	5
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
35	69	C-10	384+00		X			
			383+99	X				
			383+54		X			
			383+48	X				
			381+61					X
			380+73		X			
			380+36				X	
			380+34			X		
			380+32					X
			380+18				X	
			379+18				X	
			379+14				X	
			379+12	X				
			379+12		X			
			378+97			X		
			378+69					X
			378+14				X	
			377+32		X			
			377+27			X		
			377+21			X		
			376+69				X	
			375+17			X		
			374+43				X	
			374+42				X	
			373+62	X				
			373+55			X		
			373+55		X			
			373+36	X				
			373+31			X		
			373+30		X			
			373+00			X		
			372+48			X		
			372+43				X	
			372+43				X	
			368+79				X	

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

			Quantity per Lane (SF)	6			39			137			523			1		
				Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
706	C-10	383+33										15	2	30			
		383+26										7	2	14			
		382+62										4	2	8			
		382+61										5	2	10			
		382+54										3	2	6			
		382+36										5	2	10			
		382+35										5	2	10			
		382+22										9	2	18			
		382+17										8	2	16			
		382+15								3	2	6					
		381+38										6	2	12			
		381+13										3	2	6			
		380+77										6	2	12			
		380+77										8	2	16			
		380+08										3	2	6			
		379+44										1	1	1			
		378+98													1	1	1
		378+48										4	2	8			
		378+36										5	2	10			
		377+97										6	2	12			
		377+86										2	2	4			
		377+81										5	2	10			
		377+62										4	2	8			
		377+34										30	2	60			
		377+24										3	3	9			
		377+22										3	2	6			
		377+21										3	3	9			
		377+21										26	2	52			
		377+09					5	3	15								
		376+87										1	2	2			
		376+58										12	2	24			
		376+46										16	2	32			
		376+16										10	2	20			
		376+10					3	3	9								
		376+06					3	3	9								
		376+05										8	2	16			
		375+96								6	3	18					
		375+94										2	2	4			
		375+76								3	3	9					
		375+69								3	3	9					
		375+09								4	3	12					
		374+89								5	5	25					
		374+84										1	1	1			
		374+79								5	3	15					
		374+57										1	2	2			
		374+34								3	3	9					
		374+15										1	1	1			
		374+10										3	2	6			
		373+95										3	3	9			
		373+89										3	2	6			
		373+75										1	1	1			
		373+61										2	1	2			
		373+08										3	2	6			
		373+04										3	2	6			
		372+87								4	3	12					
		372+81										5	2	10			
		372+77	3	2	6													
		372+76								6	3	18						
		372+74								2	2	4						
		372+68					2	3	6									
		372+27										5	2	10			
		371+90										1	2	2			

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

			Quantity per Lane (SF)	72			0			756			1128			216		
				Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
2172	C-10	383+62											6	12	72			
		381+27														6	12	72
		380+36											6	12	72			
		379+74														6	12	72
		378+20														6	12	72
		377+32								37	12	444						
		376+75											12	12	144			
		376+73											12	12	144			
		376+28											6	12	72			
		375+76	6	12	72													
		375+75											6	12	72			
		375+21											26	12	312			
		375+21											20	12	240			
		372+67								26	12	312						

*"If and Where Directed" Estimated Quantity

PR-9 / PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

59

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

			Quantity per Lane (Unit)		14	12	6	8	0
			Quantity per Lane* (Unit)		19	19	19	19	1
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station		Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
40	77	C-13	384+33			X			
			385+18					X	
			385+21				X		
			385+27		X				
			385+55		X				
			386+09			X			
			386+15				X		
			386+30		X				
			386+40					X	
			386+46					X	
			387+07			X			
			387+71		X				
			387+96					X	
			387+99				X		
			388+40		X				
			388+48			X			
			388+60		X				
			389+37			X			
			390+23		X				
			390+39					X	
			391+02			X			
			391+24				X		
			391+45		X				
			391+84		X				
			392+27			X			
			392+78				X		
			393+02		X				
			393+20					X	
			393+85			X			
			394+03				X		
			394+09		X				
			394+72		X				
			394+93			X			
			395+58			X			
			395+79		X				
			396+65			X			
			396+77					X	
			397+34		X				
			398+25			X			
			398+48					X	

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

		Quantity per Lane (SF)		0			10			0			199			0		
Quantity per Sheet (SF)	Sheet No.	Station		Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
				Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
209	C-13	384+14											4	2	8			
		384+18											3	2	6			
		384+69											3	2	6			
		386+09											4	2	8			
		386+27											7	2	14			
		386+40											2	2	4			
		386+48											3	2	6			
		387+42											6	2	12			
		388+24											5	1	5			
		388+99					5	2	10									
		389+82											5	2	10			
		390+23											2	1	2			
		390+49											1	2	2			
		390+62											3	5	15			
		390+64											3	2	6			
		390+66											3	2	6			
		392+21											3	2	6			
		393+35											5	2	10			
		394+33											6	2	12			
		394+96											4	2	8			
		395+01											1	2	2			
		395+13											3	2	6			
		395+13											1	2	2			
		395+28											2	2	4			
		395+43											1	1	1			
		395+45											1	1	1			
		395+69											2	2	4			
		395+80											5	2	10			
		395+80											2	1	2			
		395+92											1	1	1			
		395+96											2	2	4			
		396+09											1	2	2			
		397+06											4	2	8			
		397+19											3	2	6			

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

		Quantity per Lane (SF)		0			0			72			504			360		
Quantity per Sheet (SF)	Sheet No.	Station		Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
				Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
936	C-13	386+77											6	12	72			
		390+38								6	12	72						
		391+24											6	12	72			
		391+79											20	12	240			
		392+81											10	12	120			
		397+90														30	12	360

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

			Quantity per Lane (Unit)		3	4	1	22	6
			Quantity per Lane* (Unit)		19	19	19	19	13
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station		Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
36	89	C-13	398+09					X	
			396+78					X	
			396+56					X	
			395+72					X	
			395+20					X	
			394+65						X
			394+42					X	
			394+37					X	
			394+30		X				
			394+28		X				
			394+25			X			
			393+58					X	
			392+05					X	
			389+19			X			
			388+49					X	
			388+48					X	
			388+21					X	
			388+09						X
			387+98					X	
			387+93					X	
			387+87					X	
			387+87					X	
			387+84						X
			387+70					X	
			387+68					X	
			387+36						X
			387+28						X
			387+22						X
			386+50					X	
			386+45				X		
			386+39					X	
			385+56			X			
			384+73			X			
			384+71		X				
			384+04					X	
			384+03					X	

"If and Where Directed" Estimated Quantity

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

		Quantity per Lane (SF)		34			39			62			49			44		
Quantity per Sheet (SF)	Sheet No.	Station		Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
				Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
228	C-13	397+07											3	5	15			
		394+54											1	2	2			
		393+76														1	2	2
		393+58								11	4	44						
		392+99											1	2	2			
		392+76														3	1	3
		392+44											3	1	3			
		391+43														1	3	3
		390+76								2	3	6						
		390+07		9	2	18												
		390+05		8	2	16												
		390+01					6	5	30									
		389+92											6	2	12			
		389+05					3	3	9									
		388+56														6	2	12
		387+52											3	2	6			
		387+52														2	2	4
		386+88											1	1	1			
		386+85														5	4	20
		386+85								3	4	12						
		385+00											4	2	8			

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

		Quantity per Lane (SF)		156			0			0			696			504		
Quantity per Sheet (SF)	Sheet No.	Station		Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
				Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
1356	C-13	394+28		7	12	84												
		392+99														6	12	72
		392+21											6	12	72			
		392+21														6	12	72
		391+43											6	12	72			
		390+66											6	12	72			
		390+66														6	12	72
		389+89														6	12	72
		389+09														6	12	72
		389+09		6	12	72												
		388+31														6	12	72
		386+75														6	12	72
		386+51											25	12	300			
		386+28											15	12	180			

PR-10 / PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

			Quantity per Lane (Unit)	19	20	11	32	4
			Quantity per Lane* (Unit)	37	37	37	37	6
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
			399+60		X			
			399+66					X
			400+36				X	
			400+43					X
			400+47				X	
			400+73				X	
			400+93				X	
			400+93					X
			401+00	X				
			401+85		X			
			402+02				X	
			402+52			X		
			402+54				X	
			402+68	X				
			402+72					X
			403+49		X			
			404+16			X		
			404+22	X				
			404+30			X		
			404+85				X	
			405+00		X			
			405+75		X			
			405+82	X				
			406+44				X	
			406+52			X		
			406+58		X			
			406+62				X	
			406+77				X	
			407+68	X				
			407+92				X	
			408+00		X			
			408+09				X	
			408+31	X				
			408+36			X	X	
			408+43		X			
			408+96	X				
			409+02				X	
			409+46				X	
			409+53	X				
			409+55		X			
			409+65				X	
86	154	C-14	409+69	X	X			
			410+28		X			
			410+30				X	
			410+42		X			
			410+73	X				
			411+04				X	
			411+17				X	
			411+18			X		
			411+47		X			
			411+90				X	
			411+91			X		
			412+64				X	
			412+73	X				
			413+01			X		
			413+51		X			
			413+77	X				
			414+52		X			
			414+96	X				
			415+72		X			
			416+05	X				
			416+11				X	
			416+83		X			
			416+84				X	
			417+32	X				
			417+40				X	
			417+57				X	
			417+62			X		
			418+08		X			
			418+15	X				
			418+34				X	
			418+93		X			
			419+56				X	
			419+75				X	
			419+88			X		
			419+89				X	
			420+48			X		
			421+53	X				
			422+13				X	
			422+27	X				
			422+31		X			
			426+55	X				
			426+74				X	

*"If and Where Directed" Estimated Quantity

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

			Quantity per Lane (SF)	0			36			0			459			68	
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
		398+57										1	1	1			
		398+70										5	2	10			
		398+77										6	2	12			
		398+80										4	2	8			
		398+85										6	2	12			
		399+18										3	3	9			
		399+20				2	2	4									
		399+25										3	3	9			
		399+40										7	2	14			
		399+46										1	1	1			
		399+48										3	4	12			
		399+51										4	2	8			
		399+85													2	2	4
		399+85													2	2	4
		400+30													2	1	2
		400+30													2	1	2
		400+83										2	1	2			
		401+78													5	2	10
		401+78													5	2	10
		401+88													5	2	10
		401+88													5	2	10
		402+03										7	2	14			
		402+34										1	1	1			
		402+65										4	2	8			
		403+22													4	2	8
		403+22													4	2	8
		404+07										1	2	2			
		405+41										1	2	2			
		405+51										6	4	24			
		405+52										1	1	1			
		406+14										1	1	1			
		407+35										1	1	1			
		407+44										1	1	1			
		407+81										1	1	1			
		408+53										4	2	8			
		409+84										5	2	10			
563	C-14	410+18										2	2	4			
		410+35										4	2	8			
		411+42										6	2	12			
		411+88										1	2	2			
		414+09										10	2	20			
		414+36										1	1	1			
		414+52										5	2	10			
		415+06										4	2	8			
		415+23										4	2	8			
		415+27										5	2	10			
		415+37										8	2	16			
		415+47										5	2	10			
		415+74										3	2	6			
		415+86										6	2	12			
		415+99				6	2	12									
		418+43										5	2	10			
		418+52										1	1	1			
		419+48										1	1	1			
		420+50										1	1	1			
		420+54										1	1	1			
		420+77										5	2	10			
		421+42										2	2	4			
		422+23										3	2	6			
		422+33										8	2	16			
		422+36										10	3	30			
		422+47										2	2	4			
		422+72										2	2	4			
		422+99										6	2	12			
		424+31										2	2	4			
		424+54										4	2	8			
		425+43										2	1	2			
		425+45										5	2	10			
		425+72										5	2	10			
		425+78										4	2	8			
		425+96				4	4	16									
		426+22				2	2	4									
		426+87										5	2	10			
		426+95										4	2	8			

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

			Quantity per Lane (SF)	0			0			408			750			72	
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
		399+06							10	12	120						
		399+08													6	12	72
		400+96							6	12	72						
		403+37										6	12	72			
		403+98										6	12	72			
		404+50										15	6	90			
1230	C-14	404+96										25	12	300			
		406+49							6	12	72						
		409+27										6	12	72			
		411+17										6	12	72			
		420+19							6	12	72						
		421+48							6	12	72						
		425+59										6	12	72			

PR-11 / PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

61

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Quantity per Lane (Unit)	16	18	7	30
				Quantity per Lane* (Unit)	37	37	37	37
					Lane 1	Lane 2	Lane 3	Lane 4
			426+92			X		
			426+92		X			
			426+66					X
			426+25					X
			426+20		X			
			426+20			X		
			425+54			X		
			424+28					X
			423+82				X	
			423+81		X			
			423+79			X		
			422+48					X
			422+31		X			
			422+29			X		
			422+11					X
			422+02					X
			421+79					X
			421+53					X
			421+15					X
			419+37					X
			419+31			X		
			419+12		X			
			416+06					X
			416+01			X		
			416+01		X			
			415+19			X		
			415+18		X			
			414+51			X		
			414+47		X			
			413+89		X			
			413+48					X
			413+48			X		
			412+90			X		
			412+89					X
			412+89		X			
70	148	C-14	412+11					X
			412+04					X
			411+53				X	
			411+50			X		
			411+49		X			
			411+41					X
			410+69					X
			410+34					X
			409+99			X		
			409+01		X			
			409+00			X		
			407+97					X
			407+50				X	
			407+48		X			
			407+41					X
			407+20					X
			406+02				X	
			405+99					X
			405+37					X
			405+11				X	
			404+96		X			
			404+94			X		
			404+39					X
			404+20					X
			403+48					X
			402+88					X
			402+88		X			
			402+83			X		
			402+62					X
			402+32				X	
			401+92		X			
			401+88			X		
			401+33			X		
			401+07					X
			400+28					X
			399+14					X
			399+09				X	

"If and Where Directed" Estimated Quantity

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

Quantity per Sheet (SF)	Sheet No.	Station	Quantity per Lane (SF)	0			58			30			93		
				Lane 1			Lane 2			Lane 3			Lane 4		
				Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
		425+01								4	3	12			
		424+73											2	4	8
		424+72											3	2	6
		424+06					4	6	24						
		423+93					3	3	9						
		418+24								3	3	9			
181	C-14	417+76											12	2	24
		415+09											7	2	14
		413+30								3	3	9			
		403+12											3	2	6
		402+73											5	4	20
		402+32											5	3	15
		399+84					5	2	10						
		399+71					5	3	15						

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

Quantity per Sheet (SF)	Sheet No.	Station	Quantity per Lane (SF)	0			372			360			1332		
				Lane 1			Lane 2			Lane 3			Lane 4		
				Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
		426+32											14	12	168
		424+99											6	12	72
		421+91								6	12	72			
		420+23								6	12	72			
		420+19					6	12	72						
		413+62											11	12	132
2064	C-14	413+13											30	12	360
		408+92					13	12	156						
		407+49					6	12	72	9	12	108			
		407+48					6	12	72						
		407+47											14	12	168
		405+02											24	12	288
		405+14											12	12	144
		405+11								9	12	108			

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

	Quantity per Lane (Unit)	11	8	1	1	0
	Quantity per Lane* (Unit)	19	19	19	19	4

Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
21	80	C-15	427+37		X			
			428+14	X				
			428+92		X			
			429+80	X				
			429+96	X				
			430+74		X			
			431+26	X				
			432+02		X			
			433+05	X				
			433+89	X				
			434+67	X				
			434+72		X			
			435+34			X		
			436+59	X				
			437+49		X			
			437+65	X				
			438+05	X				
			439+03		X			
			439+05	X				
			439+85				X	
			440+03		X			

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

	Quantity per Lane (SF)	0	78	92	368	68

Quantity per Sheet (SF)	Sheet No.	Station	Lane 1 L	Lane 1 W	Lane 1 S	Lane 2 L	Lane 2 W	Lane 2 S	Lane 3 L	Lane 3 W	Lane 3 S	Lane 4 L	Lane 4 W	Lane 4 S	Lane 5 L	Lane 5 W	Lane 5 S
606	C-15	427+01				3	1	3									
		427+23							3	2	6						
		427+28							3	2	6						
		427+34							5	2	10						
		427+65				4	1	4									
		428+45										1	1	1			
		428+55										2	1	2			
		428+56				3	2	6									
		428+95							5	2	10						
		428+96										5	2	10			
		429+05										2	1	2			
		429+14										5	2	10			
		429+21										12	2	24			
		429+35										2	1	2			
		429+73				5	3	15									
		429+87				3	5	15									
		429+87				5	5	25									
		429+96										2	1	2			
		430+01										3	2	6			
		430+06										5	2	10			
		430+12				3	2	6									
		430+61										3	1	3			
		431+04										1	1	1			
		431+14										15	2	30			
		431+31							5	3	15						
		431+91										2	2	4			
		431+96							3	2	6						
		432+08							2	2	4						
		432+10							7	2	14						
		433+44										4	2	8			
		433+56										5	2	10			
		433+65							5	3	15						
		433+72										2	2	4			
		433+90										3	2	6			
		433+95										3	2	6			
		434+15										1	1	1			
		434+56										12	2	24			
		434+92										1	1	1			
		435+14										8	2	16			
		435+31										10	2	20			
		435+35										10	2	20			
		435+70										1	2	2			
		435+92										3	2	6			
		435+97				4	1	4									
		436+25										6	2	12			
		436+48										1	2	2			
		436+69										3	1	3			
		436+89										4	2	8			
		437+25										1	2	2			
		437+30							3	2	6						
		437+66										3	1	3			
		438+16										1	1	1			
		438+16										4	2	8			
		438+25										13	2	26			
		438+29										2	1	2			
		438+52										4	2	8			
		439+36													5	2	10
		439+36													5	2	10
		439+65													1	2	2
		439+65													1	2	2
		439+77													4	2	8
		439+77													4	2	8
		439+95													2	2	4
		439+95													2	2	4
		440+03													4	2	8
		440+03													4	2	8
		440+16										2	1	2			
		440+16										5	2	10			
		440+45										1	2	2			
		440+97													2	1	2
		440+97													2	1	2
		441+02										6	2	12			
		441+36										6	2	12			
		441+62										6	2	12			
		441+90										6	2	12			

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

	Quantity per Lane (SF)	0	0	0	528	72

Quantity per Sheet (SF)	Sheet No.	Station	Lane 1 L	Lane 1 W	Lane 1 S	Lane 2 L	Lane 2 W	Lane 2 S	Lane 3 L	Lane 3 W	Lane 3 S	Lane 4 L	Lane 4 W	Lane 4 S	Lane 5 L	Lane 5 W	Lane 5 S
600	C-15	429+48										6	12	72			
		432+61										6	12	72			
		433+38										6	12	72			
		437+90										20	12	240			
		440+45													6	12	72
		441+24										6	12	72			

*"If and Where Directed" Estimated Quantity

PR-13 / PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

63

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

	Quantity per Lane (Unit)	2	4	3	23
	Quantity per Lane* (Unit)	19	19	19	19

Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4
32	76	C-15	441+92			X	
			441+60		X		
			441+51	X			X
			441+02		X		
			439+63				X
			438+54				X
			438+24				X
			437+24				X
			436+50		X		
			436+49				X
			436+41				X
			436+36				X
			435+76				X
			435+69				X
			432+93				X
			431+75		X		
			431+56			X	
			431+28				X
			431+00				X
			430+59				X
			429+44	X			
			429+43				X
			429+05				X
			428+73				X
			428+60				X
			428+30			X	
			428+20				X
			428+00				X
			427+77				X
			427+68				X
			427+25				X

*"If and Where Directed" Estimated Quantity

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

	Quantity per Lane (SF)	0			0			0			154		

Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
154	C-15	441+12										9	5	45
		440+85										3	1	3
		437+10										5	3	15
		436+75										4	2	8
		435+97										3	2	6
		435+97										2	2	4
		435+20										5	2	10
		433+39										9	2	18
		431+21										3	3	9
		430+30										4	3	12
		430+30										4	2	8
		430+30										4	2	8
		429+00										4	2	8

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

	Quantity per Lane (SF)	0			0			0			1224		

Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
1224	C-15	440+40										8	12	96
		437+10										6	12	72
		436+55										26	12	312
		434+39										6	12	72
		434+07										20	12	240
		429+51										12	12	144
		428+46										12	12	144
		428+26										12	12	144

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NJDOT Design Services

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

Quantity per Lane (Unit)			8	8	3	3	0
Quantity per Lane* (Unit)			19	19	19	19	3
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
22	79	C-16	442+30		X			
			446+10	X				
			446+94	X				
			447+18		X			
			447+92				X	
			448+05		X			
			449+19	X				
			449+99			X		
			450+22		X			
			450+80	X				
			451+92	X				
			451+96		X			
			452+70	X				
			452+70		X			
			453+49				X	
			453+50			X		
			453+82		X			
			455+72	X				
			456+54				X	
			456+54			X		
			456+65	X				
			456+69		X			

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

Quantity per Lane (SF)			0			64			67			389			68		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
588	C-16	442+13										4	2	8			
		442+26										3	2	6			
		442+28										3	2	6			
		442+32										1	1	1			
		442+38										3	2	6			
		442+40										5	2	10			
		442+48										1	1	1			
		442+52										1	2	2			
		442+54										2	3	6			
		442+90										5	2	10			
		443+15										3	2	6			
		443+20										6	2	12			
		443+38							5	2	10						
		443+40										5	2	10			
		443+52										2	2	4			
		443+68										5	4	20			
		443+68													2	1	2
		443+68													2	1	2
		443+82										1	1	1			
		443+89													6	4	24
		443+89													6	4	24
		444+07										1	2	2			
		444+16										2	1	2			
		444+19										3	2	6			
		444+29										3	2	6			
		444+36													1	2	2
		444+36													1	2	2
		444+51										2	1	2			
		444+54													3	1	3
		444+54													3	1	3
		444+69													3	1	3
		444+69													3	1	3
		444+97										6	1	6			
		445+36										2	1	2			
		445+47										1	1	1			
		445+50										3	2	6			
		445+64							5	2	10						
		446+19										1	2	2			
		446+99							4	2	8						
		447+03										9	2	18			
		447+19										3	2	6			
		448+22				6	1	6									
		448+35				3	1	3									
		448+67										1	1	1			
		448+76				3	2	6									
		448+93				2	2	4									
		449+07										6	2	12			
		449+25										6	2	12			
		449+47										3	2	6			
		450+10										5	2	10			
		450+22										1	1	1			
		450+32										4	2	8			
		450+74										3	2	6			
		450+87										2	2	4			
		451+51										5	2	10			
		451+72				5	5	25									
		452+40							5	3	15						
		452+42										4	2	8			
		452+69										2	2	4			
		452+82										5	2	10			
		452+96										1	2	2			
		453+43										1	1	1			
		453+52				4	3	12									
		453+61										5	2	10			
		454+11										9	2	18			
		454+27										5	2	10			
		454+74										10	2	20			
		454+93										13	2	26			
		455+29										1	2	2			
		455+39										4	2	8			
		456+30							3	2	6						
		456+36										6	2	12			
		456+48				4	2	8									
		456+66							6	3	18						
		456+69										5	2	10			
		456+76										5	2	10			

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

Quantity per Lane (SF)			0			0			204			624			0		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
828	C-16	448+79							17	12	204						
		442+02										6	12	72			
		442+81										6	12	72			
		443+59										6	12	72			
		448+76										22	12	264			
		449+85										6	12	72			
		450+63										6	12	72			

"If and Where Directed" Estimated Quantity

PR-15 / PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

65

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

			Quantity per Lane (Unit)	9	11	10	9
			Quantity per Lane* (Unit)	19	19	19	15
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4
39	72	C-16	456+43	X			
			456+42		X		
			456+02			X	
			455+29			X	
			454+47			X	
			454+33			X	
			453+42			X	
			453+25	X			
			453+24		X		
			452+69	X			
			452+67		X		
			451+91		X		
			450+47			X	
			450+17	X			
			449+47			X	
			449+33				X
			449+00		X		
			447+91		X		
			447+91	X			
			447+77				X
			447+20	X			
			447+19		X		
			446+95				X
			446+56			X	
			446+42		X		
			445+82				X
			445+79		X		
			445+78	X			
			445+09				X
			444+94	X			
			444+93		X		
			444+91			X	
			444+52				X
			444+21				X
			443+42		X		
			443+40	X			
			443+39			X	
			442+97				X
			442+39				X

*"If and Where Directed" Estimated Quantity

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

			Quantity per Lane (SF)	0			0			39			30		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
69	C-16	452+50							8	3	24			
		451+97							5	3	15			
		451+59										5	2	10
		447+56										4	2	8
		442+11										6	2	12

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

			Quantity per Lane (SF)	72			0			0			72		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
144	C-16	448+25										6	12	72
		446+10	6	12	72									

NJDOT Design Services

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NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	4	7	7	3
			Quantity per Lane* (Unit)	19	19	19	6
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4
21	63	C-17	459+65		X		
			460+08				X
			460+10			X	
			460+34	X			
			461+09			X	
			461+26		X		
			461+74	X			
			462+47		X		
			462+80	X			
			462+94			X	
			465+60		X		
			465+85			X	
			466+07		X		
			467+94			X	
			468+08	X			
			468+51		X		
			469+18			X	
			470+19			X	
			470+37				X
			470+61		X		
			471+43				X

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39			Quantity per Lane (SF)	6			64			21			25		
				Lane 1			Lane 2			Lane 3			Lane 4		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
116	C-17	457+15											1	1	1
		457+93					4	2	8						
		458+71											5	2	10
		459+53											5	2	10
		461+05											2	1	2
		462+29											1	2	2
		463+61		2	3	6									
		464+10								4	3	12			
		464+66					14	4	56						
		471+32								3	3	9			

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40			Quantity per Lane (SF)	72			0			372			72		
				Lane 1			Lane 2			Lane 3			Lane 4		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
516	C-17	458+38											6	12	72
		463+76		6	12	72				6	12	72			
		463+87								12	12	144			
		470+19								13	12	156			

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	5	6	4
			Quantity per Lane* (Unit)	19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
15	57	C-17	467+58	X		
			467+58		X	
			467+57			X
			466+59	X		
			466+57		X	
			465+04	X		
			465+02		X	
			462+03	X		
			462+03		X	
			460+27		X	
			460+27	X		
			460+06			X
			459+80			X
			458+20			X
			457+42		X	

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39			Quantity per Lane (SF)	24			0			0		
				Lane 1			Lane 2			Lane 3		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size
24	C-17	459+15		8	3	24						

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40			Quantity per Lane (SF)	0			72			72		
				Lane 1			Lane 2			Lane 3		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size
144	C-17	463+79								6	12	72
		463+78					6	12	72			

*"If and Where Directed" Estimated Quantity

PR-17
PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

67

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB			Slab Stabilization, Polyurethane Grout				
Pay Item No. 38			Quantity per Lane (Unit)	5	5	5	3
			Quantity per Lane* (Unit)	38	38	38	29
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4
18	143	C-18	474+15			X	
			474+17				X
			475+45		X		
			476+04				X
			476+06			X	
			476+16	X			
			476+79	X			
			476+79		X		
			477+35				X
			477+37			X	
			479+14		X		
			479+17	X			
			481+18			X	
			481+34		X		
			481+39	X			
			483+11			X	
			484+23		X		
			484+29	X			

I-280 EB			Partial Depth Concrete Pavement Patch											
Pay Item No. 39			Quantity per Lane (SF)	0			0			33			71		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
104	C-18	471+64							2	3	6			
		471+92							4	3	12			
		478+17										15	3	45
		478+50										5	2	10
		482+32										2	2	4
		482+32										3	2	6
		482+32										3	2	6
		484+95							3	2	6			
		485+86							3	3	9			

I-280 EB			Full Depth Reinforced Concrete Pavement Repair											
Pay Item No. 40			Quantity per Lane (SF)	0			0			72			0		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
72	C-18	472+42							6	12	72			

I-280 WB			Slab Stabilization, Polyurethane Grout				
Pay Item No. 38			Quantity per Lane (Unit)	2	3	1	1
			Quantity per Lane* (Unit)	38	38	38	25
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4
7	139	C-18	485+68			X	
			479+35		X		
			479+33	X			
			477+00				X
			475+59	X			
			475+54		X		
			474+06		X		

I-280 WB			Partial Depth Concrete Pavement Patch											
Pay Item No. 39			Quantity per Lane (SF)	20			17			0			8		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
45	C-18	481+18	4	5	20									
		481+16				4	2	8						
		480+38				3	3	9						
		477+13										4	2	8

*"If and Where Directed" Estimated Quantity

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PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	2	1	1	3
			Quantity per Lane* (Unit)	38	38	38	29
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4
7	143	C-19	486+29	X			
			492+35				X
			493+04			X	
			493+26		X		
			493+41	X			
			493+82				X
			494+47				X

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39			Quantity per Lane (SF)	67			184			428			26		
				Lane 1			Lane 2			Lane 3			Lane 4		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
705	C-19	486+88								5	3	15			
		489+21								4	4	16			
		489+34								4	4	16			
		489+72											4	3	12
		489+72											3	2	6
		489+83											4	2	8
		493+67		2	2	4									
		493+67		2	2	4									
		494+13					3	3	9						
		494+27					3	5	15						
		494+40					3	3	9						
		494+52					2	2	4						
		494+52					3	3	9						
		494+54		2	3	6									
		494+65					3	3	9						
		494+67								3	4	12			
		494+80								3	2	6			
		494+91								4	4	16			
		494+92					3	3	9						
		494+92		3	3	9									
		495+03								3	3	9			
		495+15					4	3	12						
		495+17								4	3	12			
		495+27					3	3	9						
		495+30								3	3	9			
		495+31		3	3	9									
		495+64					3	3	9						
		495+64		3	3	9									
		495+65		1	2	2									
		495+65								4	3	12			
		495+66								4	4	16			
		495+91					5	3	15						
		495+91					3	3	9						
		495+92								3	2	6			
		495+92								3	5	15			
		496+04								3	4	12			
		496+04								2	2	4			
		496+15					4	4	16						
		496+17								3	4	12			
		496+17								3	2	6			
		496+41								2	2	4			
		496+41								2	3	6			
		497+20					3	3	9						
		497+33					3	2	6						
		497+45		2	2	4	3	3	9						
		497+45					3	3	9						
		497+56		3	4	12									
		497+56		2	4	8									
		497+70					2	2	4						
		497+83					2	2	4						
		498+10								4	9	36			
		498+22								2	2	4			
		498+22								3	3	9			
		498+34								2	3	6			
		498+34								3	3	9			
		498+59								3	3	9			
		498+60								2	3	6			
		498+71								4	4	16			
		498+71								2	4	8			
		498+98								3	3	9			
		499+10								4	4	16			
		499+11								3	2	6			
		499+34								3	6	18			
		499+75								4	5	20			
		499+88								3	4	12			
		500+13								3	4	12			
		500+25								3	4	12			
		500+65								4	4	16			
		500+67					3	3	9						

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40			Quantity per Lane (SF)	144			3684			1080			72		
				Lane 1			Lane 2			Lane 3			Lane 4		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
4980	C-19	493+46								52	12	624			
		493+62					31	12	372						
		494+17											6	12	72
		494+23								8	12	96			
		494+92					6	12	72						
		495+03		6	12	72									
		495+63					6	12	72						
		495+78		6	12	72									
		495+79								6	12	72			
		497+32								6	12	72			
		497+78								6	12	72			
		497+97					264	12	3168						
		498+84								6	12	72			
		500+38								6	12	72			

*"If and Where Directed" Estimated Quantity

NJDOT Design Services

PR-19 / PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 WB	Slab Stabilization, Polyurethane Grout						
Pay Item No. 38			Quantity per Lane (Unit)	1	2	1	0
			Quantity per Lane* (Unit)	38	38	38	25
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4
4	139	C-19	492+54		X		
			490+80			X	
			486+56		X		
			486+54	X			

I-280 WB	Partial Depth Concrete Pavement Patch												
Pay Item No. 39			Quantity per Lane (SF)	0			613			8			88		
				Lane 1			Lane 2			Lane 3			Lane 4		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
709	C-19	500+67					3	4	12						
		500+67					4	5	20						
		500+55					3	3	9						
		500+54					4	6	24						
		500+42					3	3	9						
		500+39					4	4	16						
		500+27					3	3	9						
		500+14					3	3	9						
		500+03					4	3	12						
		499+90					2	3	6						
		499+77					4	3	12						
		499+76					4	4	16						
		499+48					3	4	12						
		499+47					3	4	12						
		499+35					3	3	9						
		499+35					3	3	9						
		499+23					3	3	9						
		499+05								4	2	8			
		498+81					4	2	8						
		498+80					3	3	9						
		498+69					2	2	4						
		498+56					3	3	9						
		498+32					2	3	6						
		498+31					4	3	12						
		498+17					5	4	20						
		498+05					3	3	9						
		497+77					3	3	9						
		497+77					3	4	12						
		497+63					4	5	20						
		497+25					2	2	4						
		497+25					3	2	6						
		496+45					4	4	16						
		496+45					2	2	4						
		496+45					3	3	9						
		496+45					2	2	4						
		496+29					4	4	16						
		496+28					3	3	9						
		496+17					3	4	12						
		496+16					3	3	9						
		496+02					2	2	4						
		496+02					2	2	4						
		495+90					5	6	30						
		495+90					2	2	4						
		495+78					3	3	9						
		495+63					3	4	12						
		495+50					3	3	9						
		495+37					3	2	6						
		495+37					2	3	6						
		495+12					2	3	6						
		495+12					3	3	9						
		494+57					6	12	72						
		494+20					3	4	12						
		493+33					2	5	10						
		493+20					4	2	8						
		489+58											7	3	21
		489+52											4	3	12
		489+47											4	2	8
		489+47											5	3	15
		487+41											3	4	12
		487+16											5	4	20

I-280 WB	Full Depth Reinforced Concrete Pavement Repair									
Pay Item No. 40			Quantity per Lane (SF)	0			144			0		
				Lane 1			Lane 2			Lane 3		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size
144	C-19	499+60					6	12	72			
		494+07					6	12	72			

*"If and Where Directed" Estimated Quantity

PR-20
PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

Quantity per Lane (Unit)				8	1	3
Quantity per Lane* (Unit)				19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
12	57	C-20	503+31	X		
			505+06	X		
			505+64	X		
			506+26	X		
			507+90	X		
			508+11		X	
			508+83	X		
			509+58			X
			512+03	X		
			513+23			X
			514+37			X
			515+80	X		

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

Quantity per Lane (SF)			96			369			79		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
544	C-20	501+16							4	3	12
		501+17							3	2	6
		501+18	4	5	20						
		501+19				3	5	15			
		501+19				3	4	12			
		501+31				3	4	12			
		501+43				3	3	9			
		501+44				4	2	8			
		501+44				4	4	16			
		501+58				5	4	20			
		501+68	3	3	9						
		501+72				3	4	12			
		501+72				3	3	9			
		502+51							3	2	6
		502+75	2	3	6						
		502+77	3	4	12						
		502+83				3	3	9			
		502+97				2	4	8			
		503+23				3	4	12			
		503+23				5	5	25			
		503+42							3	3	9
		503+56	5	3	15						
		503+58							2	4	8
		503+58							2	3	6
		503+66				3	2	6			
		503+66				4	3	12			
		503+71							2	2	4
		503+79				2	2	4			
		503+83				3	2	6			
		503+84							2	3	6
		503+84							2	3	6
		503+97							4	3	12
		504+05				2	2	4			
		504+18				2	3	6			
		504+22							2	2	4
		504+53				2	2	4			
		505+06				3	3	9			
		505+06				2	2	4			
		505+14				3	3	9			
		505+34				3	3	9			
		505+34				3	4	12			
		505+35	4	4	16						
		505+48				3	3	9			
		505+87	3	4	12						
		507+31				2	2	4			
		508+74				3	2	6			
		508+87				4	3	12			
		509+19	2	3	6						
		509+39				3	2	6			
		509+49				3	2	6			
		510+17				3	3	9			
		510+29				3	3	9			
		510+66				3	3	9			
		510+66				2	1	2			
		511+39				3	2	6			
		513+07				3	3	9			
		514+49				3	3	9			
		514+62				3	2	6			
		515+40				2	3	6			
		515+40				3	3	9			

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

Quantity per Lane (SF)			72			1452			144		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
1668	C-20	501+13	6	12	72						
		501+85				60	12	720			
		502+67				8	12	96			
		503+10				6	12	72			
		503+49				6	12	72			
		505+18				7	12	84			
		506+17				6	12	72			
		506+19							6	12	72
		507+22							6	12	72
		509+49				7	12	84			
		512+16				21	12	252			

*"If and Where Directed" Estimated Quantity

PR-21 / PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

71

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

Quantity per Lane (Unit)			0	1	2
Quantity per Lane* (Unit)			19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
3	57	C-20	514+08			X
			513+01			X
			507+01		X	

*"If and Where Directed" Estimated Quantity

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

Quantity per Lane (SF)			30			489			61		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
580	C-20	514+56				7	5	35			
		514+54				2	2	4			
		514+24				3	4	12			
		514+23				3	3	9			
		514+23	2	2	4						
		513+95	2	4	8						
		512+51	2	2	4						
		512+25				3	3	9			
		511+89				3	2	6			
		511+88	3	2	6						
		511+88	2	4	8	3	2	6			
		511+60				3	2	6			
		509+66				4	2	8			
		507+57							3	4	12
		506+40				5	3	15			
		506+30				3	3	9			
		506+26				3	3	9			
		506+23				3	2	6			
		506+13				3	3	9			
		506+00				4	4	16			
		505+56				3	3	9			
		505+56				3	3	9			
		505+44				3	2	6			
		505+44				4	4	16			
		505+32				4	4	16			
		505+21							4	4	16
		505+20				4	4	16			
		505+07				3	4	12			
		504+54				2	3	6			
		504+42				3	3	9			
		504+42				3	3	9			
		504+29				3	4	12			
		504+29				2	2	4			
		504+17				2	4	8			
		504+04				3	4	12			
		503+93				3	4	12			
		503+70				3	3	9			
		503+69				3	5	15			
		503+57				3	3	9			
		503+57				2	2	4			
		503+42				3	3	9			
		503+42				2	3	6			
		503+30				2	3	6			
		503+06				2	2	4			
		502+92							3	3	9
		502+76				3	8	24			
		502+26				2	3	6			
		502+14							3	3	9
		502+14							3	3	9
		501+85				3	2	6			
		501+60				3	4	12			
		501+59				3	4	12			
		501+46				3	3	9			
		501+40							3	2	6
		501+35				2	3	6			
		501+19				4	4	16			
		501+18				3	4	12			
		501+06				3	3	9			

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

Quantity per Lane (SF)			0			384			0		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
384	C-20	507+19				26	12	312			
		502+76				6	12	72			

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

PR-22 / PR-35

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	1	2	6	0
			Quantity per Lane* (Unit)	17	17	17	2
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4
9	53	C-21	517+23		X		
			517+26			X	
			518+54	X			
			518+75			X	
			519+67		X		
			520+55			X	
			524+10			X	
			527+39			X	
			528+90			X	

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39			Quantity per Lane (SF)	0			88			21			0		
				Lane 1			Lane 2			Lane 3			Lane 4		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
109	C-21	516+44					3	2	6						
		516+55					3	2	6						
		516+57					3	2	6						
		516+81					3	3	9						
		516+81					3	3	9						
		516+97					3	2	6						
		520+73								3	2	6			
		521+49					4	3	12						
		521+51								3	3	9			
		523+05					3	2	6						
		523+07					3	3	9						
		523+15					3	2	6						
		523+28					2	2	4						
		523+82					3	3	9						
		528+45								2	3	6			

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40			Quantity per Lane (SF)	0			72			0			0		
				Lane 1			Lane 2			Lane 3			Lane 4		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
72	C-21	517+08					6	12	72						

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	2	3	8
			Quantity per Lane* (Unit)	17	17	17
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
13	51	C-21	525+92			X
			525+75			X
			525+32			X
			525+14			X
			524+87		X	
			524+33			X
			523+34			X
			520+46			X
			520+39		X	
			520+38	X		
			518+85			X
			516+53	X		
			516+53		X	

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39			Quantity per Lane (SF)	6			147			0		
				Lane 1			Lane 2			Lane 3		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size
153	C-21	525+37					4	4	16			
		525+37					4	3	12			
		525+12					3	3	9			
		523+95					3	4	12			
		523+95					3	3	9			
		523+60					3	3	9			
		521+59					3	3	9			
		519+26		2	3	6						
		517+67					3	4	12			
		517+54					4	8	32			
		517+49					3	3	9			
		517+47					3	3	9			
		516+14					3	3	9			

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40			Quantity per Lane (SF)	0			192			312		
				Lane 1			Lane 2			Lane 3		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size
504	C-21	524+40								26	12	312
		524+17					16	12	192			

*"If and Where Directed" Estimated Quantity

NJDOT Design Services

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PR-23 / PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

Quantity per Lane (Unit)			3	1	6
Quantity per Lane* (Unit)			19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
10	57	C-22	529+60			X
			530+16	X		
			532+25			X
			534+17	X		
			534+38			X
			535+73			X
			536+26		X	
			536+81	X		
			538+19			X
			542+52			X

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

Quantity per Lane (SF)			32			45			30		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
107	C-22	529+20				3	2	6			
		529+23							3	2	6
		531+56				3	3	9			
		535+57				3	4	12			
		535+60				3	3	9			
		535+74				3	3	9			
		536+94	2	4	8						
		536+94	3	4	12						
		539+13							3	2	6
		541+70							3	3	9
		542+23							3	3	9
		542+24	4	3	12						

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

Quantity per Lane (SF)			144			72			72		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
288	C-22	531+60							6	12	72
		535+12	6	12	72						
		537+98				6	12	72			
		539+52	6	12	72						

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

Quantity per Lane (Unit)			1	3	3
Quantity per Lane* (Unit)			19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
7	57	C-22	542+49	X		
			538+69			X
			538+62			X
			534+40		X	
			533+33		X	
			531+48		X	
			529+31			X

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

Quantity per Lane (SF)			0			356			24		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
380	C-22	541+96				5	5	25			
		535+83				2	3	6			
		535+82				3	2	6			
		535+66				3	3	9			
		535+16				4	2	8			
		535+15				6	3	18			
		534+29							2	4	8
		534+29							2	5	10
		534+29							3	2	6
		534+00				4	2	8			
		533+47				22	12	264			
		529+08				3	4	12			

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

Quantity per Lane (SF)			1368			72			672		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
2112	C-22	543+81	104	12	1248						
		539+52							6	12	72
		538+82							40	12	480
		538+67				6	12	72			
		537+42							10	12	120
		536+80	10	12	120						

*"If and Where Directed" Estimated Quantity

PR-24
PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB	Slab Stabilization, Polyurethane Grout					
Pay Item No. 38			Quantity per Lane (Unit)	0	4	8
			Quantity per Lane* (Unit)	19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
12	57	C-23	547+72		X	
			547+78			X
			549+56			X
			549+89			X
			550+01			X
			550+08			X
			550+21		X	
			550+36			X
			550+37		X	
			550+55		X	
			551+02			X
			552+30			X

I-280 EB	Partial Depth Concrete Pavement Patch											
Pay Item No. 39			Quantity per Lane (SF)	65			0			25		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			
			Length	Width	Size	Length	Width	Size	Length	Width	Size
90	C-23	546+67	3	3	9						
		547+05	2	2	4						
		547+59	3	4	12						
		547+71	3	4	12						
		549+89							1	4	4
		549+93							4	3	12
		555+52							3	3	9
		558+11	4	7	28						

I-280 EB	Full Depth Reinforced Concrete Pavement Repair											
Pay Item No. 40			Quantity per Lane (SF)	360			684			1140		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			
			Length	Width	Size	Length	Width	Size	Length	Width	Size
2184	C-23	547+59							25	12	300
		548+70	30	12	360						
		548+71							70	12	840
		548+72				57	12	684			

I-280 WB	Slab Stabilization, Polyurethane Grout					
Pay Item No. 38			Quantity per Lane (Unit)	0	1	3
			Quantity per Lane* (Unit)	19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
4	57	C-23	550+76		X	
			550+73			X
			549+77			X
			548+19			X

I-280 WB	Partial Depth Concrete Pavement Patch											
Pay Item No. 39			Quantity per Lane (SF)	83			9			0		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			
			Length	Width	Size	Length	Width	Size	Length	Width	Size
92	C-23	555+21	3	3	9						
		555+11				3	3	9			
		551+67	14	4	56						
		550+93	3	2	6						
		550+53	4	3	12						

I-280 WB	Full Depth Reinforced Concrete Pavement Repair											
Pay Item No. 40			Quantity per Lane (SF)	0			0			684		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			
			Length	Width	Size	Length	Width	Size	Length	Width	Size
684	C-23	556+68							6	12	72
		550+55							39	12	468
		547+98							12	12	144

*"If and Where Directed" Estimated Quantity

PR-25
PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB	Slab Stabilization, Polyurethane Grout						
Pay Item No. 38			Quantity per Lane (Unit)	0	2	1	1
			Quantity per Lane* (Unit)	18	18	18	9
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4
4	63	C-24	561+96		X		
			568+03		X		
			568+49				X
			571+00			X	
			571+22				

I-280 EB	Partial Depth Concrete Pavement Patch												
Pay Item No. 39			Quantity per Lane (SF)	16			12			24			0		
Quantity per Sheet (SF)	Sheet No.	Station		Lane 1			Lane 2			Lane 3			Lane 4		
				Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
52	C-24	563+69					4	3	12						
		564+26								3	3	9			
		564+33								3	3	9			
		564+49													
		564+52								2	3	6			
		564+55													
		564+73													
		567+37													
		569+20		4	4	16									
		569+83													
		570+86													

I-280 WB	Slab Stabilization, Polyurethane Grout					
Pay Item No. 38			Quantity per Lane (Unit)	1	0	1
			Quantity per Lane* (Unit)	18	18	18
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
2	54	C-24	569+56			X
			562+32	X		

I-280 WB	Partial Depth Concrete Pavement Patch												
Pay Item No. 39			Quantity per Lane (SF)	39			12			0			
Quantity per Sheet (SF)	Sheet No.	Station		Lane 1			Lane 2			Lane 3			
				Length	Width	Size	Length	Width	Size	Length	Width	Size	
51	C-24	571+44		6	3	18							
		571+07		3	3	9							
		565+70		4	3	12							
		560+46					3	4	12				

I-280 WB	Full Depth Reinforced Concrete Pavement Repair												
Pay Item No. 40			Quantity per Lane (SF)	0			0			72			
Quantity per Sheet (SF)	Sheet No.	Station		Lane 1			Lane 2			Lane 3			
				Length	Width	Size	Length	Width	Size	Length	Width	Size	
72	C-24	566+61								6	12	72	

*"If and Where Directed" Estimated Quantity

PR-26
PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No 38			Quantity per Lane (Unit)	3	1	1	0	1
			Quantity per Lane* (Unit)	19	19	19	1	10
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
6	68	C-25	578+21	X				
			578+25		X			
			580+10	X				
			580+87			X		
			581+02					X
			584+60	X				

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39		Quantity per Lane (SF)	12			0			0			0			0		
			Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
12	C-25	575+66	3	2	6												
		584+86	3	2	6												

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40		Quantity per Lane (SF)	168			0			0			0			0		
			Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
168	C-25	579+40	14	12	168												

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	0	0	1
			Quantity per Lane* (Unit)	19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
1	57	C-25	580+89			X

**"If and Where Directed" Estimated Quantity

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39		Quantity per Lane (SF)	45			5			0		
			Lane 1			Lane 2			Lane 3		
Quantity per Sheet (SF)	Sheet No.	Station	Length	Width	Size	Length	Width	Size	Length	Width	Size
50	C-25	586+38	8	3	24						
		579+98				1	5	5			
		579+77	2	3	6						
		579+77	2	3	6						
		574+99	3	3	9						

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40		Quantity per Lane (SF)	0			0			180		
			Lane 1			Lane 2			Lane 3		
Quantity per Sheet (SF)	Sheet No.	Station	Length	Width	Size	Length	Width	Size	Length	Width	Size
180	C-25	580+89							15	12	180

NJDOT Design Services

PR-27 / PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

77

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	0	3	1	5
			Quantity per Lane* (Unit)	19	19	19	19
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4
9	76	C-26	590+25		X		
			590+84				X
			591+55		X		
			591+61				X
			592+53				X
			593+90		X		
			595+36			X	
			598+32				X
			598+37				
			601+73				X

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39		Quantity per Lane (SF)	0		0		0		6		
			Lane 1			Lane 2			Lane 3		
Quantity per Sheet (SF)	Sheet No.	Station	Length	Width	Size	Length	Width	Size	Length	Width	Size
6	C-26	594+60									
		595+89									
		598+85							2	3	6
		598+94									

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40		Quantity per Lane (SF)	0		0		72		144		
			Lane 1			Lane 2			Lane 3		
Quantity per Sheet (SF)	Sheet No.	Station	Length	Width	Size	Length	Width	Size	Length	Width	Size
216	C-26	595+58									
		595+65									
		595+82									
		598+91							6	12	72

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	0	0	0	3	0
			Quantity per Lane* (Unit)	19	19	19	1	1
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
3	59	C-26	598+33				X	
			598+27				X	
			596+93				X	

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39		Quantity per Lane (SF)	0			42			0			12			0		
			Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
54	C-26	602+99										4	3	12			
		596+11				7	6	42									

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40		Quantity per Lane (SF)	0			0			180			0			0		
			Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
180	C-26	600+21							15	12	180						

*"If and Where Directed" Estimated Quantity

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NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	0	3	1	3	0
			Quantity per Lane* (Unit)	18	18	18	18	14
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
7	86	C-27	603+51					
			604+53			X		
			604+55		X			
			606+39				X	
			608+14				X	
			613+29		X			
			613+48		X			
			615+39				X	

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39			Quantity per Lane (SF)	42			4			27			0			0		
				Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
73	C-27	608+75								3	4	12						
		609+18		2	3	6												
		611+67		3	3	9												
		611+97		3	4	12												
		613+42		5	3	15												
		614+90								3	3	9						
		614+90								2	3	6						
		615+04					2	2	4									

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40			Quantity per Lane (SF)	0			0			144			312			108		
				Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station	"	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
564	C-27	613+23											26	12	312			
		613+31								6	12	72						
		613+33														9	12	108
		614+52								6	12	72						

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	2	1	1	0	2
			Quantity per Lane* (Unit)	18	18	18	18	18
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
6	90	C-27	613+50					X
			613+50	X				
			613+32		X			
			613+31					X
			613+30	X				
			608+75			X		

*"If and Where Directed" Estimated Quantity

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39			Quantity per Lane (SF)	29			17			0			30			30		
				Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
106	C-27	614+27														2	4	8
		612+90											3	2	6			
		612+63											3	2	6			
		612+57											3	2	6			
		612+57											4	3	12			
		612+52					2	3	6									
		611+76														2	7	14
		610+99														2	4	8
		610+20					2	3	6									
		608+47	3	3	9													
		608+30	5	4	20													
		607+10					1	3	3									
		605+55					2	1	2									

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40			Quantity per Lane (SF)	72			384			0			312			300		
				Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
Quantity per Sheet (SF)	Sheet No.	Station		Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
1068	C-27	613+51					26	12	312									
		613+49											26	12	312	7	12	84
		613+34														6	12	72
		613+32	6	12	72													
		610+23														6	12	72
		609+45														6	12	72
		608+65					6	12	72									

NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

	Quantity per Lane (Unit)	0	0	1	0	2
	Quantity per Lane* (Unit)	18	18	18	18	18

Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
3	90	C-28	618+36					X
			623+11					X
			624+95			X		

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

	Quantity per Lane (SF)	12			0			12			98			47		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
169	C-28	619+52										4	2	8			
		619+63										7	2	14			
		619+79													7	3	21
		620+45										3	4	12			
		620+48							4	3	12	4	3	12	4	3	12
		620+58										3	3	9			
		620+82										3	3	9			
		620+94										4	4	16			
		621+50	4	3	12												
		623+31										2	4	8			
		624+05										2	3	6			
		625+12													1	3	3
		625+91													1	5	5
		627+85										1	2	2			
		628+28													1	3	3
		629+06													1	3	3
		630+08										1	2	2			

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

	Quantity per Lane (SF)	0			0			0			144			0		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
144	C-28	617+33										6	12	72			
		618+23										6	12	72			

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38

	Quantity per Lane (Unit)	0	0	0	0	4
	Quantity per Lane* (Unit)	18	18	18	18	18

Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
4	90	C-28	630+94					X
			624+62					X
			623+94					X
			619+05					X

*"If and Where Directed" Estimated Quantity

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39

	Quantity per Lane (SF)	16			21			28			73			18		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
156	C-28	630+34							4	4	16						
		630+19				2	3	6									
		628+91										5	9	45			
		628+77										4	2	8			
		628+62										5	4	20			
		628+33				5	3	15									
		622+83							3	4	12						
		618+96													2	9	18
		618+79	4	4	16												

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40

	Quantity per Lane (SF)	156			0			0			0			72		
Quantity per Sheet (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			Lane 4			Lane 5		
			Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size	Length	Width	Size
228	C-28	622+84													6	12	72
		619+12	13	12	156												

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NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — **Slab Stabilization, Polyurethane Grout**

Pay Item No. 38

	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
Quantity per Lane (Unit)	7	2	0	0	1
Quantity per Lane* (Unit)	18	18	8	13	13

Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
10	70	C-29	632+90		X			
			634+25					X
			635+08	X				
			635+94	X				
			636+72	X				
			638+29	X				
			638+60	X				
			640+42	X				
			643+30	X				
			644+04		X			

I-280 EB — **Partial Depth Concrete Pavement Patch**

Pay Item No. 39

	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
Quantity per Lane (SF)	0	6	36	13	0
Quantity per Lane* (SF)	7	16	22	0	0

Quantity per Sheet (SF)	Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1 L	Lane 1 W	Lane 1 S	Lane 2 L	Lane 2 W	Lane 2 S	Lane 3 L	Lane 3 W	Lane 3 S	Lane 4 L	Lane 4 W	Lane 4 S	Lane 5 L	Lane 5 W	Lane 5 S
55	45	C-29	631+55										1	3	3			
			633+92							12	3	36						
			636+08										2	2	4			
			637+45										2	3	6			
			638+41				2	3	6									

I-280 EB — **Full Depth Reinforced Concrete Pavement Repair**

Pay Item No. 40

	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
Quantity per Lane (SF)	0	0	360	0	0
Quantity per Lane* (SF)	18	96	77	0	0

Quantity per Sheet (SF)	Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1 L	Lane 1 W	Lane 1 S	Lane 2 L	Lane 2 W	Lane 2 S	Lane 3 L	Lane 3 W	Lane 3 S	Lane 4 L	Lane 4 W	Lane 4 S	Lane 5 L	Lane 5 W	Lane 5 S
360	191	C-29	633+41							24	12	288						
			635+11							6	12	72						

I-280 WB — **Slab Stabilization, Polyurethane Grout**

Pay Item No. 38

	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
Quantity per Lane (Unit)	1	2	0	0	2
Quantity per Lane* (Unit)	19	19	8	13	13

Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
5	72	C-29	645+85	X				
			644+41		X			
			641+86		X			
			635+18					X
			632+66					X

I-280 WB — **Partial Depth Concrete Pavement Patch**

Pay Item No. 39

	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
Quantity per Lane (SF)	6	6	0	20	20
Quantity per Lane* (SF)	8	43	9	0	0

Quantity per Sheet (SF)	Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1 L	Lane 1 W	Lane 1 S	Lane 2 L	Lane 2 W	Lane 2 S	Lane 3 L	Lane 3 W	Lane 3 S	Lane 4 L	Lane 4 W	Lane 4 S	Lane 5 L	Lane 5 W	Lane 5 S
52	60	C-29	636+85										5	4	20			
			636+24				2	3	6									
			635+00	2	3	6												
			634+70													2	3	6
			633+30													2	3	6
			632+33													2	4	8

I-280 WB — **Full Depth Reinforced Concrete Pavement Repair**

Pay Item No. 40

	Lane 1	Lane 2	Lane 3	Lane 4	Lane 5
Quantity per Lane (SF)	0	0	144	0	0
Quantity per Lane* (SF)	0	0	0	0	0

Quantity per Sheet (SF)	Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1 L	Lane 1 W	Lane 1 S	Lane 2 L	Lane 2 W	Lane 2 S	Lane 3 L	Lane 3 W	Lane 3 S	Lane 4 L	Lane 4 W	Lane 4 S	Lane 5 L	Lane 5 W	Lane 5 S
144	0	C-29	637+06							6	12	72						
			636+28							6	12	72						

*"If and Where Directed" Estimated Quantity

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NJDOT Design Services

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	1	1	0
			Quantity per Lane* (Unit)	19	19	0
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
2	38	C-30	658+77		X	
			659+21	X		

I-280 EB — Partial Depth Concrete Pavement Patch

Pay Item No. 39			Quantity per Lane* (SF)	20	43	0
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1		Lane 2		Lane 3	
			Length	Width	Size	Length	Width	Size	Length	Width	Size
63	C-30									

I-280 EB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40			Quantity per Lane* (SF)	49	261	0
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1		Lane 2		Lane 3	
			Length	Width	Size	Length	Width	Size	Length	Width	Size
310	C-30									

I-280 WB — Slab Stabilization, Polyurethane Grout

Pay Item No. 38			Quantity per Lane (Unit)	2	2	0
			Quantity per Lane* (Unit)	18	18	0
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
4	36	C-30	647+94	X	X	
			647+54	X		
			646+09		X	

I-280 WB — Partial Depth Concrete Pavement Patch

Pay Item No. 39			Quantity per Lane* (SF)	18	100	0
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1		Lane 2		Lane 3	
			Length	Width	Size	Length	Width	Size	Length	Width	Size
118	C-30									

I-280 WB — Full Depth Reinforced Concrete Pavement Repair

Pay Item No. 40			Quantity per Lane* (SF)	95	81	0
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1		Lane 2		Lane 3	
			Length	Width	Size	Length	Width	Size	Length	Width	Size
176	C-30									

*"If and Where Directed" Estimated Quantity

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NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB	Slab Stabilization, Polyurethane Grout					
Pay Item No. 38			Quantity per Lane (Unit)	3	2	0
			Quantity per Lane* (Unit)	18	18	0
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
5	36	C-31	661+27	X		
			662+19		X	
			663+38		X	
			663+74	X		
			667+46	X		

I-280 EB	Partial Depth Concrete Pavement Patch											
Pay Item No. 39			Quantity per Lane* (SF)	19			41			0		
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			
			Length	Width	Size	Length	Width	Size	Length	Width	Size
60	C-31										

I-280 EB	Full Depth Reinforced Concrete Pavement Repair											
Pay Item No. 40			Quantity per Lane* (SF)	47			248			0		
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			
			Length	Width	Size	Length	Width	Size	Length	Width	Size
295	C-31										

I-280 WB	Slab Stabilization, Polyurethane Grout					
Pay Item No. 38			Quantity per Lane (Unit)	1	3	0
			Quantity per Lane* (Unit)	18	18	0
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
4	36	C-31	668+28		X	
			666+41		X	
			662+92	X	X	

I-280 WB	Partial Depth Concrete Pavement Patch											
Pay Item No. 39			Quantity per Lane* (SF)	3			19			0		
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			
			Length	Width	Size	Length	Width	Size	Length	Width	Size
22	C-31										

I-280 WB	Full Depth Reinforced Concrete Pavement Repair											
Pay Item No. 40			Quantity per Lane* (SF)	20			17			0		
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3			
			Length	Width	Size	Length	Width	Size	Length	Width	Size
37	C-31											

*"If and Where Directed" Estimated Quantity

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NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB			Slab Stabilization, Polyurethane Grout			
Pay Item No. 38			Quantity per Lane (Unit)	1	3	0
			Quantity per Lane* (Unit)	18	19	5
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
4	42	C-32	235+51		X	
			246+42		X	
			246+58	X		
			246+97		X	

I-280 EB			Partial Depth Concrete Pavement Patch								
Pay Item No. 39			Quantity per Lane* (SF)	17			37			12	
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
66	C-32										

I-280 EB			Full Depth Reinforced Concrete Pavement Repair								
Pay Item No. 40			Quantity per Lane* (SF)	43			226			42	
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
311	C-32										

I-280 WB			Slab Stabilization, Polyurethane Grout			
Pay Item No. 38			Quantity per Lane (Unit)	2	11	0
			Quantity per Lane* (Unit)	17	17	0
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
13	34	C-32	246+35		X	
			246+13		X	
			245+93		X	
			245+81		X	
			245+18		X	
			245+02		X	
			244+97	X		
			244+89		X	
			244+82	X		
			244+78		X	
			244+32		X	
			243+77		X	
			243+48		X	

I-280 WB			Partial Depth Concrete Pavement Patch								
Pay Item No. 39			Quantity per Lane* (SF)	15			87			0	
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
102	C-32										

I-280 WB			Full Depth Reinforced Concrete Pavement Repair								
Pay Item No. 40			Quantity per Lane* (SF)	88			75			0	
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
163	C-32										

*"If and Where Directed" Estimated Quantity

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NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

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NJDOT Design Services

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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

I-280 EB	Partial Depth Concrete Pavement Patch									
Pay Item No. 39			Quantity per Lane* (SF)	17			37			12	
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
66	C-33										

I-280 EB	Full Depth Reinforced Concrete Pavement Repair									
Pay Item No. 40			Quantity per Lane* (SF)	43			226			40	
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
309	C-33										

I-280 WB	Slab Stabilization, Polyurethane Grout					
Pay Item No. 38			Quantity per Lane (Unit)	0	3	0
			Quantity per Lane* (Unit)	17	17	0
Quantity per Sheet (Unit)	Quantity per Sheet* (Unit)	Sheet No.	Station	Lane 1	Lane 2	Lane 3
3	34	C-33	255+08		X	
			253+31		X	
			252+32		X	

I-280 WB	Partial Depth Concrete Pavement Patch									
Pay Item No. 39			Quantity per Lane* (SF)	15			87			0	
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
102	C-33										

I-280 WB	Full Depth Reinforced Concrete Pavement Repair									
Pay Item No. 40			Quantity per Lane* (SF)	88			75			0	
Quantity per Sheet* (SF)	Sheet No.	Station	Lane 1			Lane 2			Lane 3		
			Length	Width	Size	Length	Width	Size	Length	Width	Size
163	C-33										

*"If and Where Directed" Estimated Quantity

PR-35
PR-35

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PAVEMENT REPAIR TABLES

ROUTE I-280

CONTRACT NO. 006053070

85

NJDOT Design Services

ID=TPXBUCH date=12-MAR-2008 09:55 scale=20.024000:1.000000 pen table=\\njdotprive\v8system\njdotve\projects\NJDOTEng\plot\TBLs\Roadway\dot.tbl

file=In-House Projects\0729508 Rt 280 Concrete Rehab. and Resurfacing MP 6.2 to 13.3\Project\htz3pr35.dgn

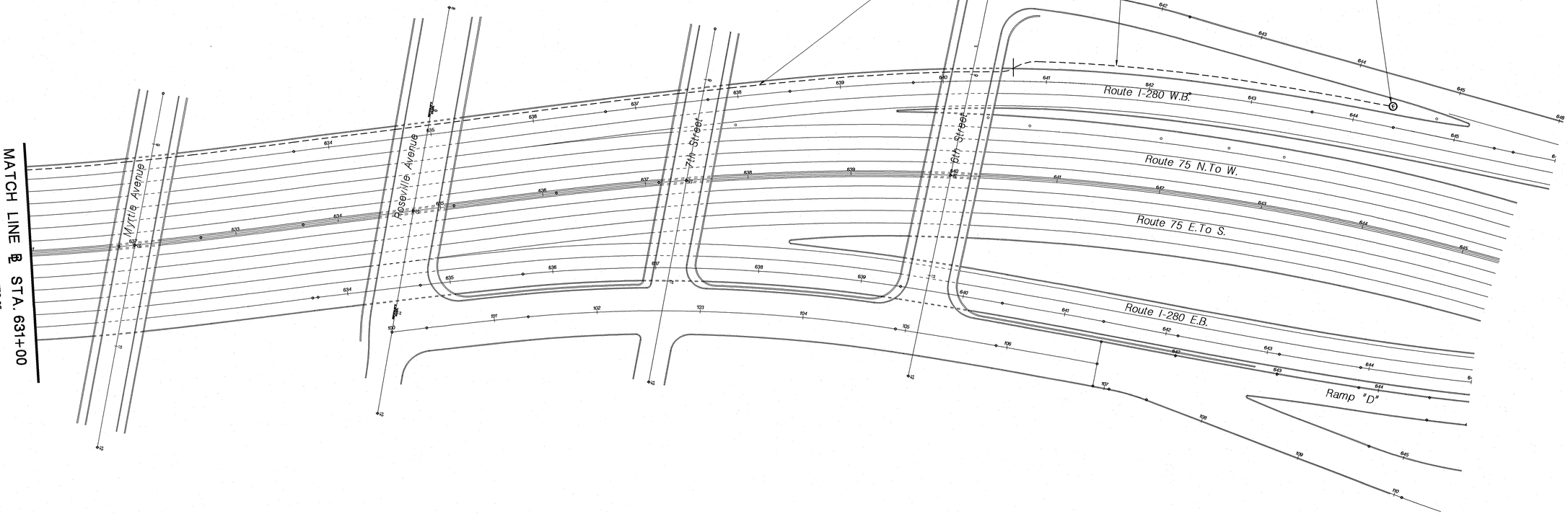
STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)

TOWNSHIP OF NEWARK

COUNTY OF ESSEX

N.J. Plane Coordinate System

CONSTRUCT: THREE 1.25" HDPE CONDUIT, TYPE BS
INSTALL: FIBER OPTIC CABLE, TYPE A
CONSTRUCT: THREE 1.25" HDPE CONDUIT, TYPE BC
INSTALL: FIBER OPTIC CABLE, TYPE A
CONSTRUCT: 38" JUNCTION BOX



50′ 0 50′ 100′

PAY ITEM NO.	STD. ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
72	7A11J	38" JUNCTION BOXES	1 UNIT
74	N7A02	THREE 1.25" HDPE CONDUIT, TYPE BC	380 L.F.
76	N7A04	THREE 1.25" HDPE CONDUIT, TYPE BS	755 L.F.
79	N7A08	FIBER OPTIC CABLE, TYPE A	1195 LF

ITS-26
ITS-26

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ITS PLANS

ROUTE I-280

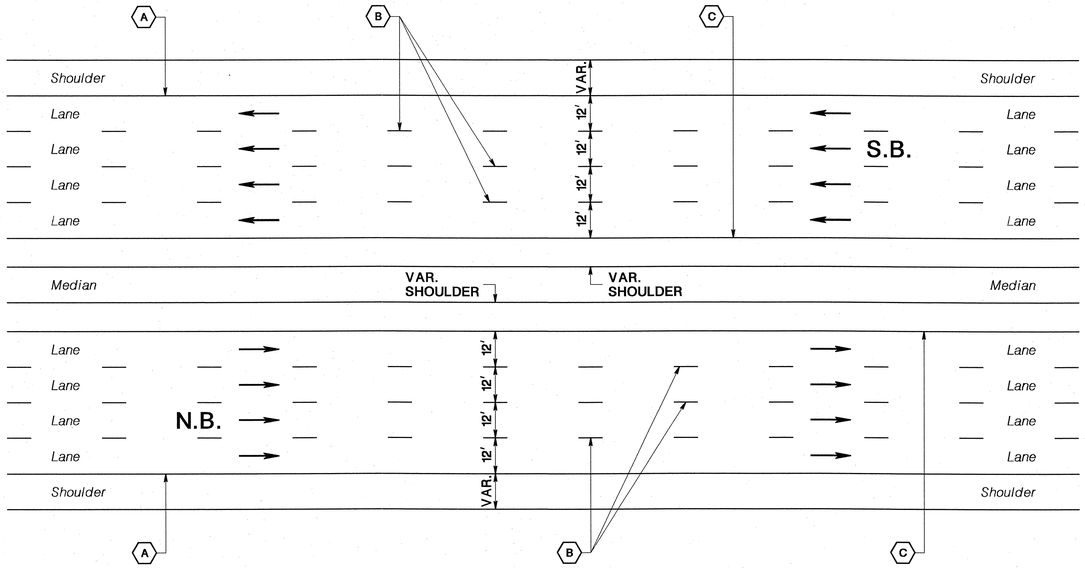
CONTRACT NO. 006053070

114

NJDOT Design Services

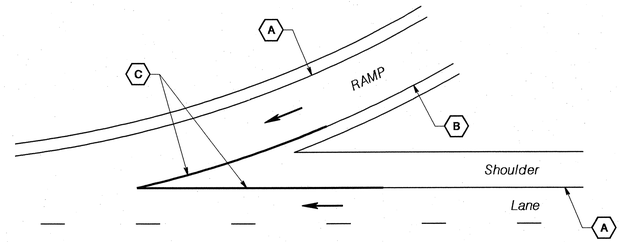
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STATE	FEDERAL PROJECT NO.
N.J.	IM-280-6(100)



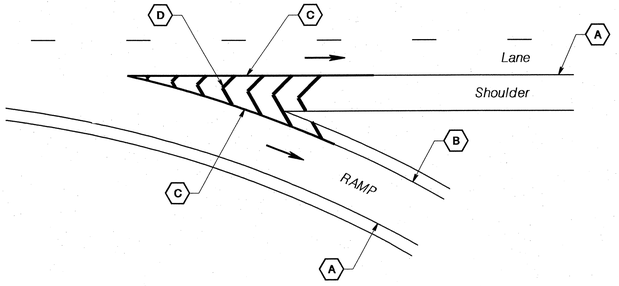
TYPICAL MAIN LINE STRIPING
4, 6, 8 & 10 LANES, DIVIDED

N.T.S



TYPICAL ENTRANCE RAMP GORE STRIPING

N.T.S



TYPICAL EXIT RAMP GORE STRIPING

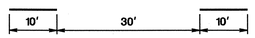
N.T.S

LEGEND

- (A) 6" SOLID WHITE LINE
- (B) 6" SOLID YELLOW LINE
- (C) 8" SOLID WHITE LINE
- (D) 24" SOLID WHITE LINES SPACED 12' c to c @ 45°

NOTE:

ALL EXISTING TRAFFIC STRIPING IS TO BE REPLACED WITH NEW TRAFFIC STRIPING IN IT'S ORIGINAL LOCATION AFTER ALL REPAIRS AND RESURFACING HAS BEEN COMPLETED.



TYPICAL DASHED LINE DETAIL

NOT TO SCALE

TS-1
TS-1

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TRAFFIC STRIPING PLANS

ROUTE I-280

CONTRACT NO. 006053070

133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		1	149

N. J. - I - 280 - 6 (37) 59 153

C.S. #

UTILITY COMPANIES		
PUBLIC SERVICE ELECTRIC & GAS COMPANY	–	GAS & ELECTRIC
NEW JERSEY BELL TELEPHONE COMPANY	–	TELEPHONE
DIRECTOR OF PUBLIC WORKS CITY OF NEWARK	–	WATER & SANITARY
CITY OF NEWARK	–	FIRE & POLICE ALARM SYSTEMS

State of New Jersey
Department of Transportation

AS BUILT PLANS OF

ROUTE 280 SECTION 6 K and 7 C

From Humboldt Street to First Street

GRADING, INCIDENTAL PAVING, BRIDGES and WALLS

City of Newark — Essex County

Scales as Indicated — November 1967

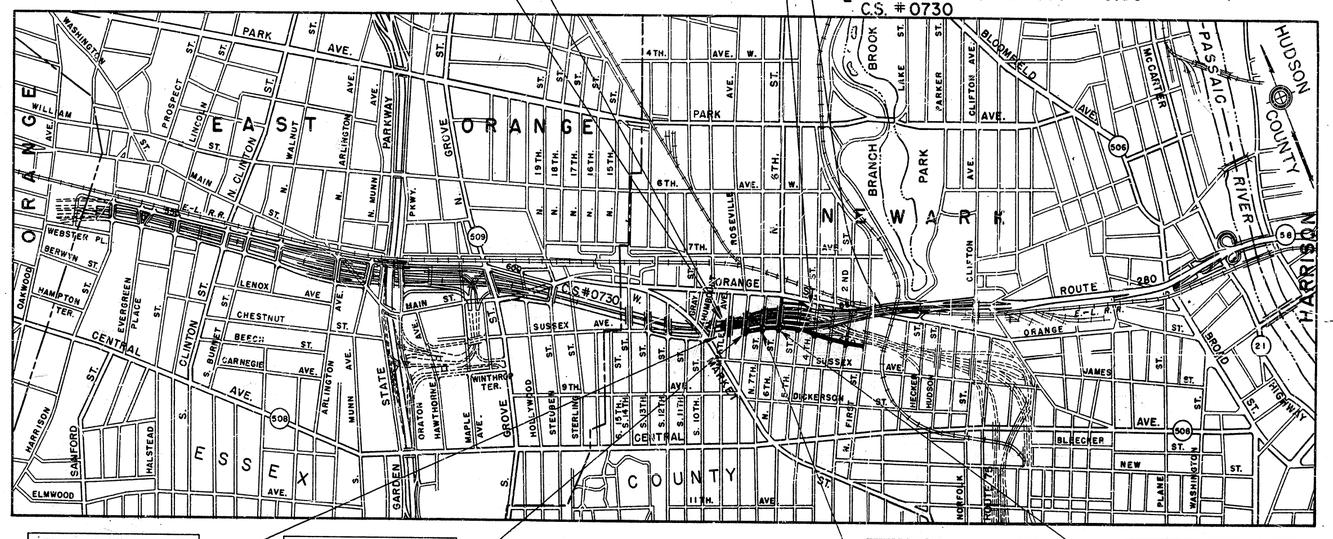
SHEET NO.	INDEX OF SHEETS
1	KEY SHEET
2-4	ESTIMATE OF QUANTITIES
5-8	DISTRIBUTION OF QUANTITIES
9-11	TYPICAL SECTIONS
12-13	ALIGNMENT
14-16	STAGE CONSTRUCTION PLANS
17-19	DEMOLITION PLANS
20-23	GENERAL PLANS
24-26	DRAINAGE & UTILITY RELOCATION PLANS
27-29	GRADING & SIGNING PLANS
30-32	ELECTRICAL PLANS
33-40	PROFILES
41-55	CROSS SECTIONS
56	EARTHWORK SUMMARY
57-88,	CONSTRUCTION DETAILS
89-149	BRIDGE & WALL PLANS
150-152	SUPPLEMENTAL CONSTRUCTION DETAILS
153	DRAINAGE & UTILITY RELOC. CHANGE OF PLAN (CHANGE OF PLAN NO. N280-30)

BEGIN FEDERAL PROJECT NO. N.J.–I–280–6 (37) 59
℄ STA. 630 + 50.00

BEGIN PROJECT
℄ STA. 630 + 25.00

END FEDERAL PROJECT NO. N.J. – I– 280–6 (37) 59
℄ ROUTE 280 E.B. STA. 643 + 16.00

END PROJECT
℄ ROUTE 280 E.B. STA. 654 + 15.00
C.S. #0730



PROJECT UNDER MYRTLE AVE. BRIDGE TO BE CONSTRUCTED UNDER THIS CONTRACT

PROJECT UNDER ROSEVILLE AVE. BRIDGE TO BE CONSTRUCTED UNDER THIS CONTRACT

PROJECT UNDER 7TH ST. BRIDGE TO BE CONSTRUCTED UNDER THIS CONTRACT

PROJECT UNDER 6TH ST. BRIDGE TO BE CONSTRUCTED UNDER THIS CONTRACT

KEY MAP

SCALE: 1" = 1,000'

DESIGN DATA

ADT 1965	=	43,150
ADT 1975	=	102,200
DHV 1975	=	10,400
D	=	55%
T	=	3%
V	=	50 M.P.H.

STANDARD HIGHWAY SPECIFICATIONS OF 1961 TO GOVERN

LENGTH OF PROJECT = 2,390.00 LIN. FT. = 0.453 MILE

LENGTH OF FEDERAL PROJECT NO. N.J. - I – 280 – 6(37)59 = 1,266.00 LIN. FT. = 0.240 MILE

sheets 1 to 149 in Newark office
149 149
April 30-1968

On June 19, 1968 Frank Schmidt called and requested us to send the bridge tracings #89/149 to 149/149 to Russel Dudas of br. dge div. Trenton - room 337. These tracings were sent as requested
H. Lang 6-19-68

Bridge tracings 89/149 to 149/149 delivered to this office 10/4/72
" B-62.5, B-62.5 and B-64.5 " " "

RESIDENT ENGINEER: JOHN R. AKIN
CONTRACTOR: FRANKLIN CONTRACTING CO.
AS BUILTS DONE BY NEWARK SURFACE DESIGN
MARCH 1973

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS
APPROVED
Division Engineer — Date

Submitted by _____ Director of Design, Transportation — 11/6/67 Date
Approved by _____ State Highway Engineer — 11-9-67 Date
Approved by _____ Commissioner of Transportation — Date

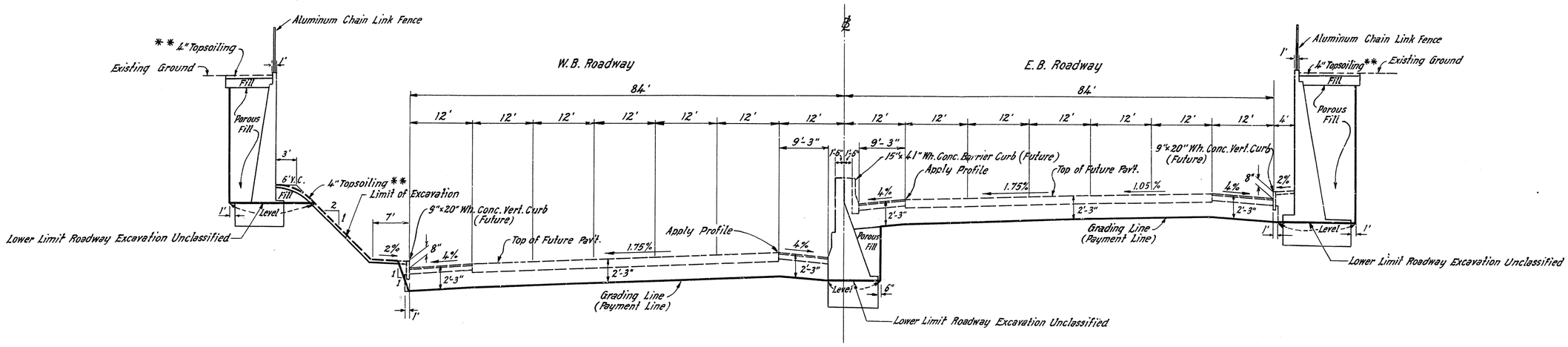
1/149/153

4-7-25

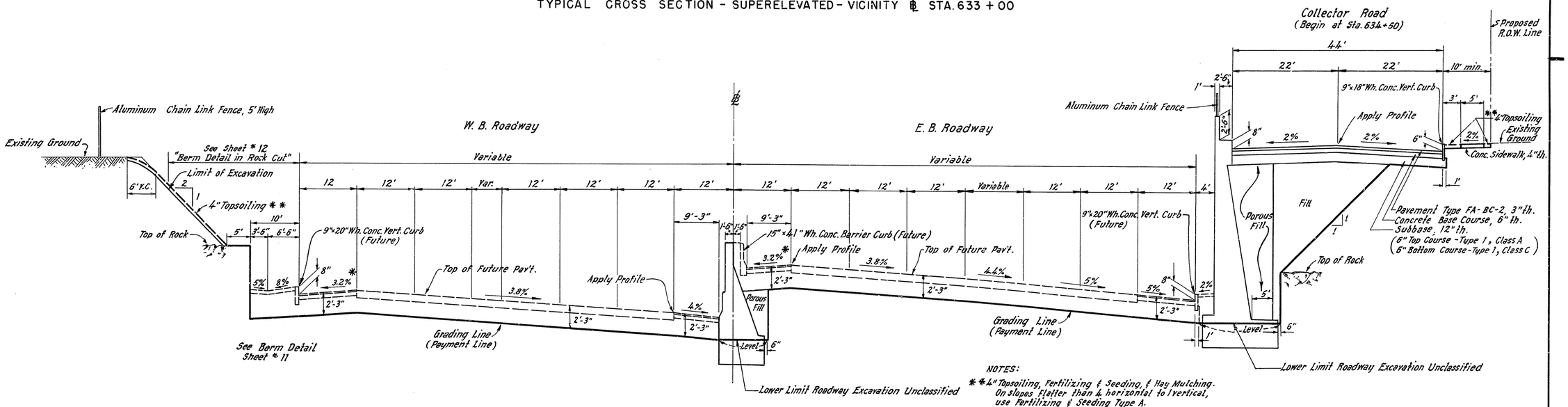
0730 001 153

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		9	~~147~~
		N. J. - 1 - 28) - 6 (37) 59		153

SCALE: HOR. 1" = 10'
VERT. 1" = 5'



TYPICAL CROSS SECTION - SUPERELEVATED - VICINITY ℄ STA. 633 + 00



Height of Fill	Side Slope	V.C.	Dist. to P.V.I.
0'- 5'	6:1	4'	2'
5'- 9'	4:1	6'	3'
9' and above	2:1	6'	7'
Cut	2:1	6'	7'

TYPICAL CROSS SECTION - SUPERELEVATED - VICINITY ℄ STA. 638 + 00

Collector Road
(Begin at Sta. 634+50)

NOTES:

** 4" Topsoiling, Fertilizing & Seeding, & Hay Mulching.
On slopes flatter than 4 horizontal to 1 vertical, use Fertilizing & Seeding Type A.
On slopes 4 horizontal to 1 vertical and steeper, use Fertilizing & Seeding Type E.

Grading Line follows future paving cross slopes as indicated except where level line is shown.

* Algebraic difference in grade between shoulder cross slope and adjacent lane, 7% max.

For Variations See Cross Sections & Plan Sh. [illegible]

State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated P.B.G.S.D. 153

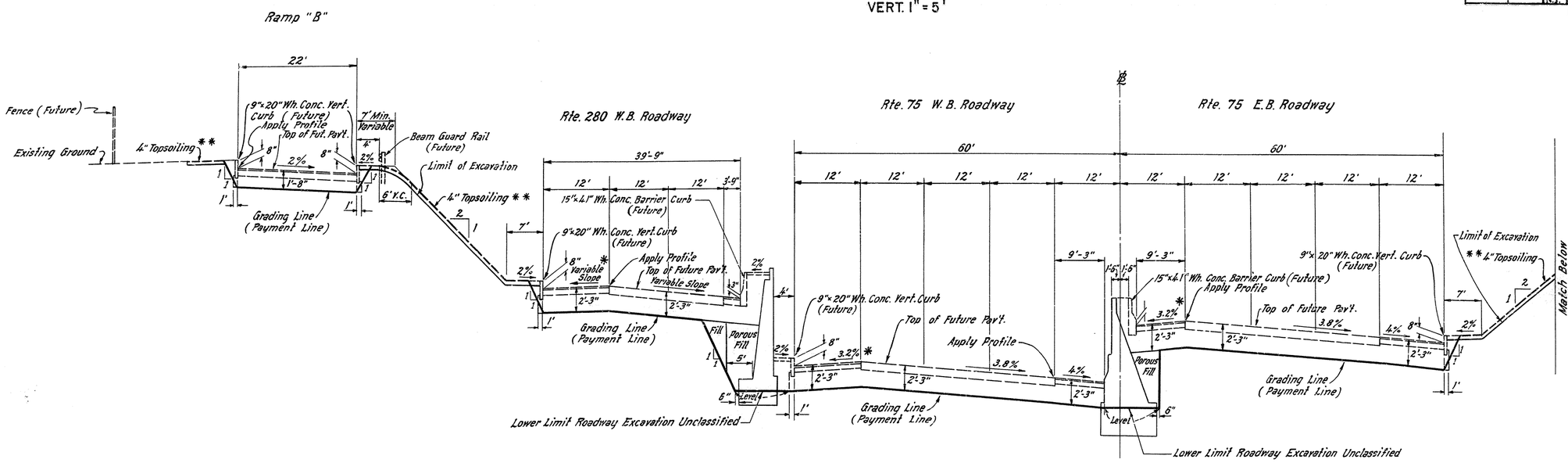
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0730 009 153

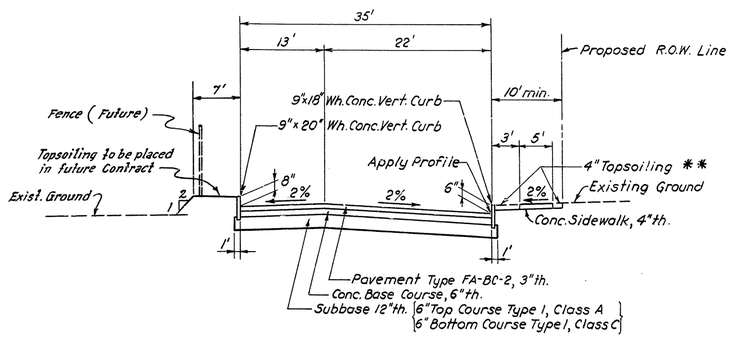
Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		10	449

N. J. - I - 280 - 6 (37) 59 153

SCALE : HOR. 1" = 10'
VERT. 1" = 5'

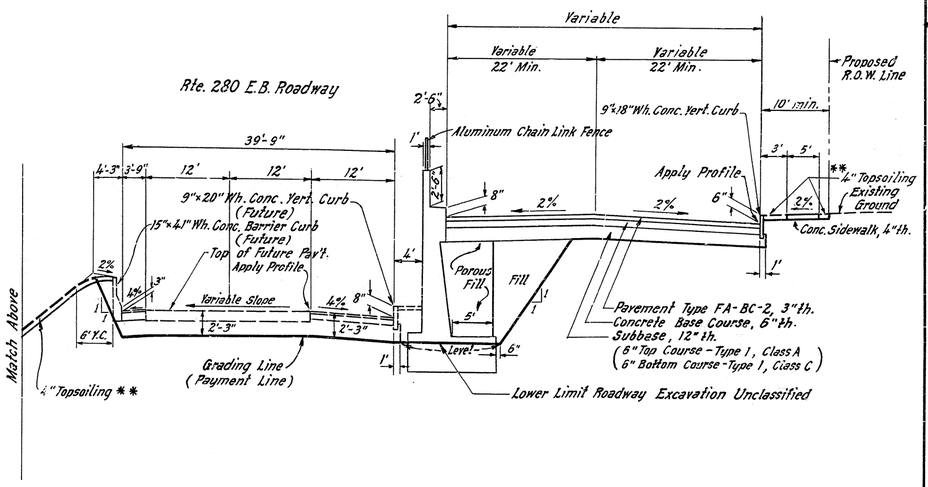


Collector Road



TYPICAL CROSS SECTION - COLLECTOR ROAD
VICINITY "CR" STA. 109+00 TO 117+85

Not to Scale



Height of Fill	Side Slope	V.C.	Dist. to P.V.I.
0'- 5'	6:1	4'	2'
5'- 9'	4:1	6'	3'
9' and above	2:1	6'	7'
Cut	2:1	6'	7'

TYPICAL CROSS SECTION - VICINITY ℄ STA. 642 + 50

NOTES:
** 4" Topsoiling, Fertilizing & Seeding, & Hay Mulching.
On slopes flatter than 4 horizontal to 1 vertical, use Fertilizing & Seeding Type A.
On slopes 4 horizontal to 1 vertical and steeper, use Fertilizing & Seeding Type E.

Grading Line follows future paving cross slopes as indicated except where level line is shown.

For Variations See Cross Sections & Plan Sheets.

* Algebraic difference in grade between shoulder cross slope and adjacent lane, 7% max.

TYPICAL SECTIONS

State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated P.B.Q.&D. 153

10
449

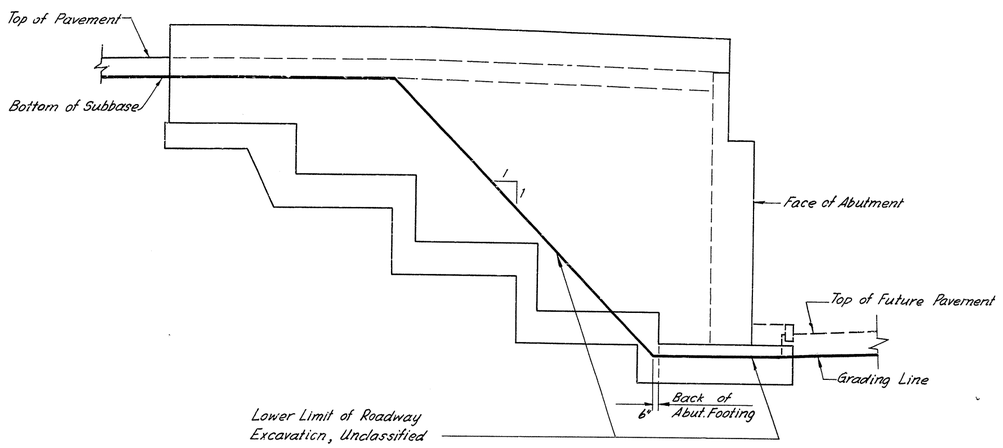
Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by P.A. Larsen Traced by M. Arhan Checked by J.O. King

0730 010 153

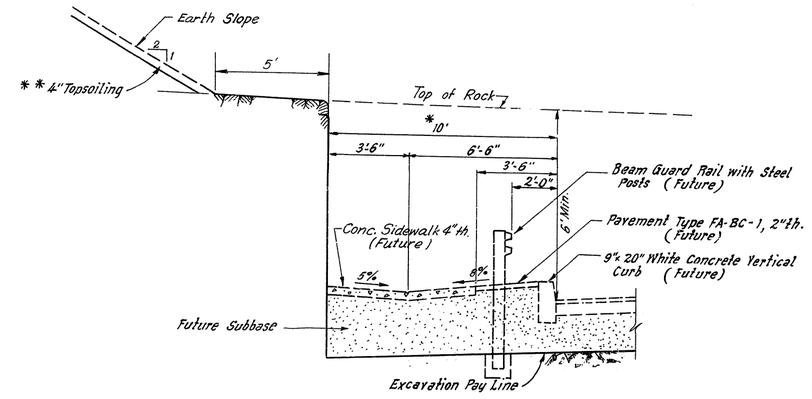
NOT TO SCALE

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
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N. J. - 1 - 28) - 6 (37) 59 153



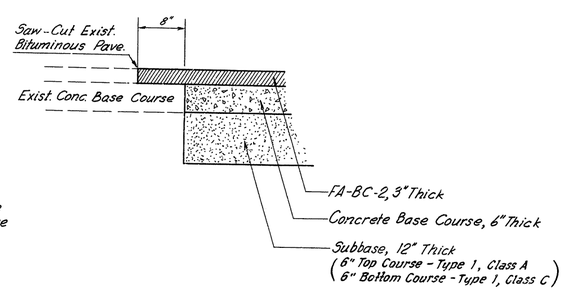
TYPICAL SECTION – ROADWAY EXCAVATION AT ABUTMENTS & WINGWALLS



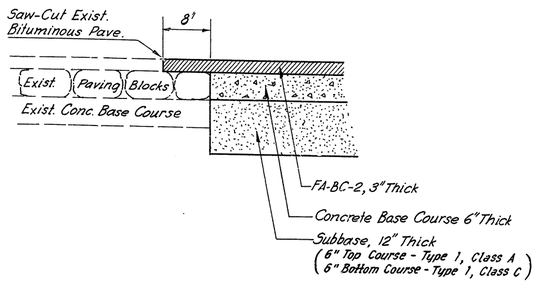
BERM DETAIL IN ROCK CUT

ROUTE 280 W.B. STA. 635+75± TO 640+65± LEFT

*Transition to meet slope treatment under 7th and 6th St. Bridges (See Structural Dwgs)



Note:
Saw-Cut edge shall not be made until new Base Course has been completed.



CONSTRUCTION SECTIONS – MEETING EXISTING STREET PAVEMENTS

NOTE:
** 4" Topsoiling, Fertilizing & Seeding, Type A, & Hay Mulching.
On slopes flatter than 4 horizontal to 1 vertical, use Fertilizing & Seeding Type A.
On slopes 4 horizontal to 1 vertical and steeper, use Fertilizing & Seeding Type E.

State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

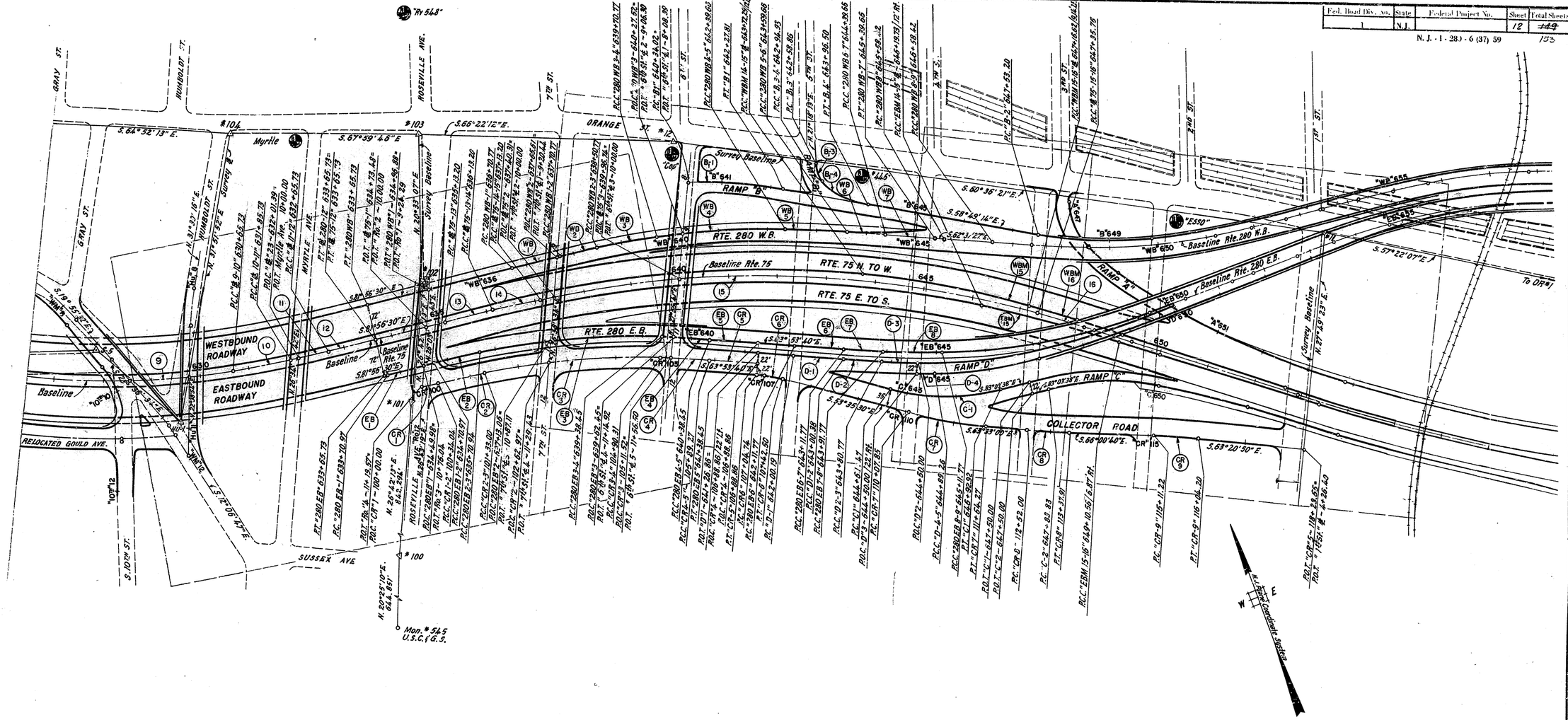
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~~149~~
153

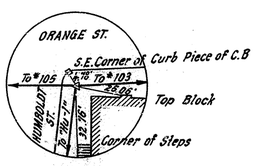
Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by P.A.Larsen Traced by M.Athar Checked by L.O.King

0730 011 153

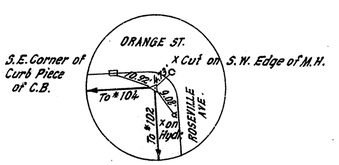
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N. J. - 1 - 280 - 6 (37) 59

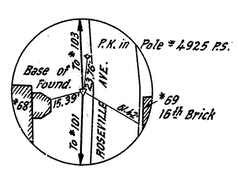




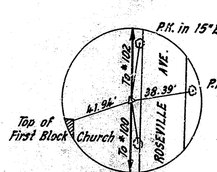
#104
(× Cut on Sidewalk)



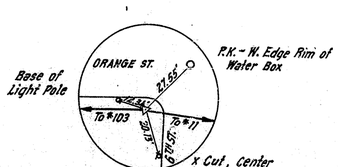
#103
(× Cut on Sidewalk)



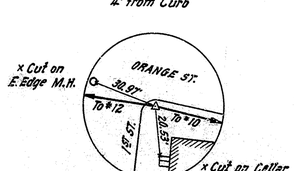
#102
(× Cut in Sidewalk)
4' from Curb



#101
(× Cut in Walk)



#12



#11

SCALE : 1" = 100'

BENCH MARKS

NAME	ELEV.	DESCRIPTION
MYRTLE	154.853'	× Cut on Northerly Bolt of Hydrant at S.W. Corner of Myrtle Ave. & Orange St. - Newark, N.J.
"Rv. 548"	148.298'	Standard Monel Metal Rivet, set at the Main Entrance of the Old Essex Troop Armory, in the North end of the Cheek Wall, 0.65' East of the Face of Bldg. and North of Orange St. - Newark, N.J.
"COP"	143.634'	□ Cut — East End, 1st Step at the Entrance to 5th Precinct Station. S.W. Corner of 6th St. and Orange St. - Newark, N.J.
#446 ORANGE	137.705	□ Cut in East End of 1st Stone Step at Upstairs Entrance to House #446, Orange St. - Newark, N.J.
"ESSO"	130.773	× Cut on N.W. Bolt of Hydrant, located at S.E. Corner of 2nd St. and Orange St. - Newark, N.J.

SURVEY BASELINE DATA

POINT	COORDINATES	
	NORTH	EAST
#104	699,957.924	2,131,114.040
#103	699,812.850	2,131,473.042
#102	699,540.829	2,131,371.057
#101	699,327.558	2,131,263.776
#12	699,603.509	2,131,951.524
#11	698,942.776	2,133,124.414
OR#1	698,615.942	2,133,634.854

State Of New Jersey
Department Of Transportation
ALIGNMENT
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

12
~~149~~ 153

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by DMitrakos Traced by M.Athan Checked by A.A.Larsen

0730 012 153

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		13	~~149~~ 153

N. J. - I - 280 - 6 (37) 59

ALIGNMENT DATA

POINT	LINE	COORDINATES NORTH	COORDINATES EAST
P.C.C. "℄ 9-10"	Baseline	699, 519. 426	2, 130, 945. 782
P.C.C. "℄ 10-11"	"	699, 495. 333	2, 131, 063. 424
P.O.C. "℄ 23 "	"	699, 493. 204	2, 131, 078. 858
P.C.C. "℄ 11-12"	"	699, 483. 036	2, 131, 142. 393
P.T. "℄ 280-12"	"	699, 468. 523	2, 131, 241. 334
P.O.T. "℄ 75" 1	Baseline Route 75	699, 453. 420	2, 131, 348. 012
P.C. "℄ 75-13"	" " "	699, 447. 851	2, 131, 387. 342
P.C.C. "℄ 75~ 13-14"	" " "	699, 433. 338	2, 131, 486. 283
P.C.C. "℄ 75~ 14-15"	" " "	699, 417. 097	2, 131, 584. 952
P.O.C. "℄ 75" 2	" " "	699, 412. 195	2, 131, 611. 617
P.O.C. "℄ 75" 3	" " "	699, 349. 722	2, 131, 860. 170
P.C.C. "℄ 75~ 15-16"	" " "	699, 014. 975	2, 132, 515. 129
P.C.C. "WBM~ 14-15"	Route 75 West Median	699, 217. 825	2, 132, 212. 610
P.C.C. "WBM~ 15-16"	" " " "	699, 033. 712	2, 132, 505. 135
P.C.C. "EBM~ 14-15"	Route 75 East Median	699, 071. 835	2, 132, 413. 657
P.C.C. "EBM~ 15-16"	" " " "	698, 902. 451	2, 132, 648. 948
P.T. "280 WB"	Route 280 Westbound	699, 539. 812	2, 131, 251. 427
P.O.T. "280 WB" 1	" " "	699, 521. 429	2, 131, 381. 273
P.C. "280 WB-1"	" " "	699, 497. 052	2, 131, 553. 447
P.O.C. "280 WB" 2	" " "	699, 483. 310	2, 131, 647. 295
P.C.C. "280 WB~ 1-2"	" " "	699, 482. 539	2, 131, 652. 388
P.C.C. "280 WB~ 2-3"	" " "	699, 469. 743	2, 131, 731. 356
P.C.C. "280 WB~ 3-4"	" " "	699, 446. 150	2, 131, 848. 999
P.O.C. "280 WB" 3	" " "	699, 432. 500	2, 131, 904. 082
P.C.C. "280 WB~ 4-5"	" " "	699, 364. 417	2, 132, 104. 842
P.C.C. "280 WB~ 5-6"	" " "	699, 315. 434	2, 132, 214. 373
P.C.C. "280 WB~ 6-7"	" " "	699, 280. 077	2, 132, 286. 135
P.T. "280 WB-7"	" " "	699, 234. 540	2, 132, 375. 164
P.C. "280 WB-8"	" " "	699, 225. 915	2, 132, 391. 820
P.C.C. "280 WB~ 8-9"	" " "	699, 180. 378	2, 132, 480. 849
P.T. "280 EB"	Route 280 Eastbound	699, 397. 234	2, 131, 231. 241
P.C. "280 EB-1"	" " "	699, 396. 499	2, 131, 236. 428
P.O.C. "280 EB" 1	" " "	699, 385. 116	2, 131, 314. 607
P.C.C. "280 EB~ 1-2"	" " "	699, 381. 987	2, 131, 335. 369
P.C.C. "280 EB~ 2-3"	" " "	699, 365. 745	2, 131, 434. 038
P.O.C. "280 EB" 2	" " "	699, 334. 333	2, 131, 572. 554
P.C.C. "280 EB~ 3-4"	" " "	699, 258. 073	2, 131, 784. 425
P.O.C. "280 EB" 3	" " "	699, 248. 201	2, 131, 806. 316
P.C.C. "280 EB~ 4-5"	" " "	699, 216. 103	2, 131, 875. 188
P.T. "280 EB-5"	" " "	699, 172. 550	2, 131, 965. 205
P.C. "280 EB-6"	" " "	699, 140. 285	2, 132, 031. 050
P.C.C. "280 EB~ 6-7"	" " "	699, 096. 732	2, 132, 121. 067
P.C.C. "280 EB~ 7-8"	" " "	699, 062. 974	2, 132, 193. 595
P.C.C. "280 EB~ 8-9"	" " "	699, 016. 431	2, 132, 304. 185
P.C. "B-1"	Ramp "B"	699, 518. 993	2, 131, 949. 964
P.T. "B-1"	" "	699, 435. 305	2, 132, 124. 417
P.C. "B-2"	" "	699, 163. 299	2, 132, 573. 913
P.C. "B_1-3"	Ramp "B_1"	699, 460. 232	2, 132, 205. 861
P.C.C. "B_1-3-4"	" "	699, 424. 949	2, 132, 205. 465
P.T. "B_1-4"	" "	699, 347. 969	2, 132, 268. 743
P.C. "C-1"	Ramp "C"	698, 987. 774	2, 132, 179. 953
P.T. "C-1"	" "	698, 903. 233	2, 132, 392. 676
P.O.T. "C" 1	" "	698, 896. 337	2, 132, 449. 338
P.O.T. "C" 2	" "	698, 874. 498	2, 132, 446. 680
P.C. "C-2"	" "	698, 870. 411	2, 132, 480. 259
P.O.T. "D" 1	Ramp "D"	699, 155. 039	2, 131, 956. 625
P.C. "D-1"	" "	699, 122. 774	2, 132, 022. 470
P.C.C. "D~ 1-2"	" "	699, 079. 136	2, 132, 112. 863
P.C.C. "D~ 2-3"	" "	699, 045. 214	2, 132, 185. 544
P.O.C. "D" 2	" "	699, 017. 617	2, 132, 249. 031
P.O.C. "D" 3	" "	698, 997. 307	2, 132, 240. 577
P.C.C. "D~ 4-5"	" "	698, 982. 537	2, 132, 276. 953

POINT	LINE	COORDINATES NORTH	COORDINATES EAST
P.O.C. "CR" 1	Collector Road	699, 346. 007	2, 131, 295. 480
P.C.C. "CR~ 1-2"	" "	699, 340. 957	2, 131, 329. 141
P.C.C. "CR~ 2-3"	" "	699, 324. 883	2, 131, 426. 787
P.O.C. "CR" 2	" "	699, 296. 504	2, 131, 553. 576
P.C.C. "CR~ 3-4"	" "	699, 220. 190	2, 131, 767. 479
P.O.C. "CR" 3	" "	699, 211. 471	2, 131, 786. 832
P.C.C. "CR~ 4-5"	" "	699, 178. 655	2, 131, 857. 301
P.O.C. "CR" 4	" "	699, 135. 283	2, 131, 946. 944
P.T. "CR-5"	" "	699, 115. 527	2, 131, 937. 263
P.C. "CR-6"	" "	699, 108. 536	2, 131, 951. 530
P.T. "CR-6"	" "	699, 088. 969	2, 131, 983. 767
P.C. "CR-7"	" "	698, 931. 477	2, 132, 197. 319
P.T. "CR-7"	" "	698, 850. 013	2, 132, 330. 626
P.C. "CR-8"	" "	698, 810. 937	2, 132, 409. 172
P.T. "CR-8"	" "	698, 774. 335	2, 132, 486. 887
P.C. "CR-9"	" "	698, 703. 876	2, 132, 645. 223
P.T. "CR-9"	" "	698, 664. 110	2, 132, 729. 269
P.O.T. "CR" 5	" "	698, 565. 671	2, 132, 925. 395

CURVE DATA

CURVE	Δ	R	L	T	E	COORDINATES OF CENTER NORTH	COORDINATES OF CENTER EAST
9	16° 09' 42"	1, 600'	451. 32'	227. 17'	16. 05'	701, 079. 029	2, 131, 303. 049
10	3° 07' 31"	2, 200'	120. 00'	60. 02'	0. 82'	701, 663. 880	2, 131, 437. 023
11	1° 00' 45"	4, 000'	80. 00'	40. 00'	0. 20'	703, 437. 735	2, 131, 742. 694
12	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	709, 369. 782	2, 132, 643. 146
13	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	689, 546. 593	2, 129, 585. 530
14	1° 25' 57"	4, 000'	100. 00'	50. 00'	0. 31'	695, 478. 640	2, 130, 885. 982
15	26° 37' 51"	2, 200'	1, 022. 56'	520. 69'	60. 78'	697, 250. 946	2, 131, 200. 518
16	1° 25' 57"	4, 000'	100. 00'	50. 00'	0. 31'	695, 807. 649	2, 130, 124. 928
WBM-15	9° 54' 51"	2, 000'	346. 07'	173. 47'	7. 51'	697, 439. 453	2, 131, 297. 518
WBM-16	1° 25' 57"	4, 000'	100. 00'	50. 00'	0. 31'	695, 845. 195	2, 130, 089. 901
EBM-15	4° 09' 13"	4, 000'	289. 98'	145. 05'	2. 63'	695, 742. 970	2, 130, 195. 853
WB-1	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	689, 595. 793	2, 130, 151. 635
WB-2	1° 08' 45"	4, 000'	80. 00'	40. 00'	0. 20'	695, 527. 841	2, 131, 052. 086
WB-3	3° 07' 31"	2, 200'	120. 00'	60. 02'	0. 82'	697, 301. 697	2, 131, 357. 758
WB-4	9° 37' 45"	1, 600'	268. 90'	134. 77'	5. 67'	697, 886. 548	2, 131, 491. 733
WB-5	3° 07' 31"	2, 200'	120. 00'	60. 02'	0. 82'	697, 332. 347	2, 131, 261. 817
WB-6	1° 08' 45"	4, 000'	80. 00'	40. 00'	0. 20'	695, 709. 821	2, 130, 482. 453
WB-7	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	690, 354. 436	2, 127, 776. 930
WB-8	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	708, 106. 019	2, 136, 990. 054
EB-1	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	689, 495. 241	2, 129, 834. 616
EB-2	1° 25' 57"	4, 000'	100. 00'	50. 00'	0. 31'	695, 427. 288	2, 130, 735. 068
EB-3	14° 02' 11"	1, 500'	367. 48'	184. 66'	11. 32'	697, 888. 824	2, 131, 171. 924
EB-4	1° 25' 57"	4, 000'	100. 00'	50. 00'	0. 31'	695, 606. 742	2, 130, 151. 090
EB-5	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	690, 192. 700	2, 127, 564. 943
EB-6	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	708, 120. 134	2, 136, 431. 313
EB-7	1° 08' 45"	4, 000'	80. 00'	40. 00'	0. 20'	702, 706. 093	2, 133, 845. 166
EB-8	3° 07' 31"	2, 200'	120. 00'	60. 02'	0. 82'	701, 066. 689	2, 133, 101. 959
B-1	11° 06' 12"	1, 000'	193. 79'	97. 20'	4. 71'	698, 579. 755	2, 131, 606. 696
B-2	19° 07' 28"	1, 000'	333. 78'	168. 46'	14. 09'	700, 018. 849	2, 133, 091. 634
B_1-3	41° 19' 25"	50'	36. 06'	18. 86'	3. 44'	699, 442. 066	2, 132, 252. 444
B_1-4	38° 48' 02"	150'	101. 58'	52. 82'	9. 03'	699, 476. 301	2, 132, 346. 401
C-1	29° 28' 08"	450'	231. 45'	118. 35'	15. 30'	699, 349. 937	2, 132, 447. 044
D-1	0° 34' 23"	10, 019. 5'	100. 20'	50. 10'	0. 13'	708, 120. 134	2, 136, 431. 313
D-2	1° 08' 45"	4, 019. 5'	80. 39'	40. 20'	0. 20'	702. 706. 093	2, 133, 845. 166
D-3	1° 47' 14"	2, 219. 5'	69. 23'	34. 62'	0. 27'	701, 066. 689	2, 133, 101. 959
D-4	1° 00' 13"	2, 241. 5'	39. 26'	19. 63'	0. 09'	701, 066. 689	2, 133, 101. 959
CR-1	0° 11' 45"	9, 958. 5'	34. 04'	17. 02'	0. 01'	689, 495. 241	2, 129, 834. 616
CR-2	1° 25' 57"	3, 958. 5'	98. 96'	49. 48'	0. 31'	695, 427. 288	2, 130, 735. 068
CR-3	14° 02' 11"	1, 458. 5'	357. 31'	179. 55'	11. 01'	697, 888. 824	2, 131, 171. 924
CR-4	1° 25' 57"	3, 958. 5'	98. 96'	49. 48'	0. 31'	695, 606. 742	2, 130, 151. 090
CR-5	0° 34' 23"	9, 958. 5'	99. 59'	49. 79'	0. 12'	690, 192. 700	2, 127, 564. 943
CR-6	10° 18' 10"	210'	37. 76'	18. 93'	0. 85'	698, 919. 960	2, 131, 859. 125
CR-7	9° 57' 30"	900'	156. 42'	78. 41'	3. 41'	699, 655. 804	2, 132, 731. 501
CR-8	2° 27' 40"	2, 000'	85. 91'	42. 96'	0. 46'	700, 601. 584	2, 133, 300. 006
CR-9	2° 39' 50"	2, 000'	92. 99'	46. 50'	0. 54'	696, 876. 627	2, 131, 832. 104

State Of New Jersey
Department Of Transportation
ALIGNMENT
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

13
~~149~~ 153

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by P. Mitrakos Traced by M. Athas Checked by R.A. Larsen

0730 013 153

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (37) 59	22	447 / 53

NOTE:
Defer placement of proposed curb across existing streets and maintain existing traffic until such time as the street is closed for mainline construction as ordered by the Engineer.

● CB-9 Location of Boring

END FEDERAL PROJECT NO. N.J.-I-280-6(37)59
℄ RTE. 280 E.B. STA. 643 + 16.00

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Pavement Excavation	S.Y.	1,202	1237 -
Porous Fill	C.Y.	3,296	3688 -
Subbase, Type 1	C.Y.	1,524	1527
Subgrade	S.Y.	4,466	4435 -
Concrete Base Course, 6" thick	S.Y.	4,466	4435 -
Pavement Type FA-BC-2, 3" thick	S.Y.	4,466	4446 -
Reset Exist. Stone Curb	L.F.	0	20 -
9"x 18" White Concrete Vertical Curb	L.F.	916	944 -
9"x 20" White Concrete Vertical Curb	L.F.	366	362
Concrete Sidewalk, 4" thick	S.Y.	742	771
Concrete Sidewalk, 6" thick	S.Y.	25	73
Concrete Sidewalk, Reinforced, 6" thick	S.Y.	37	44 -
White Concrete Island Pavement, 4" thick	S.Y.	5	2 -
Chain Link Fence, 5' High, Aluminum	L.F.	185	212
Wood Barricade, Type A	L.F.	168	168 -
Stone & Concrete Backfill	C.Y.	33	44.32
Temp. Aluminum Chain Link Fence, 5' High	L.F.	550	544 -

State Of New Jersey
Department Of Transportation
GENERAL PLANS
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

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SCALE: 1" = 30'

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by P.A. Larsen Traced by M. Arhan Checked by C.W. Koch

0730 022 153

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		23	149

SCALE: 1"=30'

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Pavement Excavation	S.Y.	972	966
Subbase, Type 1	C.Y.	1,189	1271
Subgrade	S.Y.	3,799	3649
Concrete Base Course, 6" thick	S.Y.	3,799	3649
Pavement Type FA-BC-2, 3" thick	S.Y.	3,799	3706
Permanent Bituminous Concrete Pavement (Concrete Base)	S.Y.	43	18
9"x18" White Concrete Vertical Curb	L.F.	821	786
9"x20" White Concrete Vertical Curb	L.F.	775	696
Concrete Sidewalk, 4" thick	S.Y.	456	413
White Concrete Island Pavement, 4" thick	S.Y.	5	2
Wood Barricade, Type A	L.F.	88	88
Reset Existing Stone Curb	L.F.	25	0

NOTE:
Defer placement of proposed curb across existing streets and maintain existing traffic until such time as the street is closed for mainline construction as ordered by the Engineer.

● 13-4 Location of Boring

E. 2,132,600 E. 2,132,800 E. 2,133,000 E. 2,133,200 E. 2,132,400 N. 699,200 N. 699,000 N. 698,800 N. 698,600

ERIE-LACKAWANNA R.R.

RTE. 280 W.B.

RTE. 280 E.B.

RAMP "A"

RAMP "D"

RAMP "C"

RTE. 75 N. TO W.

RTE. 75 E. TO S.

COLLECTOR ROAD

Match to Baseline Rte. 75 Sta. 64.5+80

Baseline Rte. 75

Control of Access Line

Proposed R.O.W. & Control of Access Line

Asphalt on Conc. Base

Asphalt on Granite Block on Conc. Base

ORANGE ST.

Const. 109 S.Y. Conc. Sdwk. 4"th.

Const. 188 L.F. Wood Barricade, Type A

Const. 1851 L.F. 9"x20" Wh. Conc. Vert. Curb

Const. 2081 L.F. 9"x18" Wh. Conc. Vert. Curb

Proposed Right of Way Line (Collector Road)

Const. 255 S.Y. Wh. Conc. Island Pav't., 4"th.

Const. 2459 S.Y. Pav't. Excavation

Const. 146 S.Y. Conc. Sdwk. 4"th.

Const. 3430 S.Y. Pav't. Type FA-BC-2, 3"th.

Const. 3430 S.Y. Conc. Base Course, 6"th.

Const. 3261 L.F. 9"x20" Wh. Conc. Vert. Curb

Const. 343 S.Y. Pav't. Excavation

Const. 189 S.Y. Conc. Sidewalk 4"th.

Const. 3795 S.Y. Pav't. Type FA-BC-2, 3"th.

Const. 3795 S.Y. Conc. Base Course, 6"th.

Const. 45 S.Y. Pav't. Excavation

Const. 10 L.F. Reset Exist. Stone Curb

Const. 4 S.Y. Conc. Sidewalk, 4"th. (See Drainage Plan Sh. # 26)

Const. 43 S.Y. Pav't. Excavation

Const. 43 S.Y. Permanent Bit. Conc. Pav't. (Conc. Base)

Const. 35 L.F. 9"x18" Wh. Conc. Vert. Curb

Const. 42.5 S.Y. Conc. Sidewalk, 4"th.

Const. 45 L.F. Reset Exist. Stone Curb

Const. 8 S.Y. Conc. Sidewalk, 4"th.

Const. 379 S.Y. Pav't. Excavation

See Drainage & Utility Plan Sh. # 26

See Note 14

Top of Slope

Proposed Right of Way Line (Collector Road)

Meet Exist. Curb

Meet Exist. Pavement

Meet Exist. Curb 1st St.

Meet Exist. Pav't. 1st St.

Meet Exist. Curb 2nd St.

Meet Exist. Pavement 2nd St.

Meet Exist. Curb 1st St.

Meet Exist. Pav't. 1st St.

Limit of Prop. Pavement on 22'

Variable

Control of Access Line

10' Curb Transition

LIMIT OF CONSTRUCTION

END PROJECT

BASELINE RTE. 280 E.B. STA. 654+15.00

C.S. # 0730

RTE. 75 STA. 653+50

Lorenzo & Gioconda Freda 2 Sty. Fr. Dwg.

Ralph Caruso 3 Sty. Fr. Dwg.

Nellie Bernstein

Driveway

1 Sty. Bl. Comm. (Proposed of Way Line (Collector Road)

2 Sty. Bl. Comm. Right

1 Sty. Br. Armory

3 Sty. Bl. Comm. & Apt.

1 Sty. Fr. Comm.

1 Sty. Bl. Comm.

1 Sty. Br. Gar.

2 Sty. Br. Dwg.

3 Sty. Br. Dwgs.

2 Sty. Fr. Dwg.

2½ Sty. Fr. Dwg.

2½ Sty. Br. Dwg.

City of Newark Sussex Ave. School

Bit. Playground

State Of New Jersey
Department Of Transportation
GENERAL PLANS
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

23 / 149

153

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by RA Larsen Traced by M. Athon Checked by C.W. Koch

0730 023 153

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		25	147

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NOTE: Existing Services along Orange Street that are not to be used are to be shut off at the Main.

NOTE: Locations for Roadway Junction Boxes and Foundations for Lighting Standards, Traffic Control Signals and Load Centers are indicated on this Plan Sheet as information. For Quantity Estimate of these items, see Electrical Plans.

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Air Valve Units for 36" Water Main	Unit	2	2
16" Cone Valves & Chambers for 36" Water Main	Unit	4	4
20" Gate Valves with 3" Bypass	Unit	2	1
Blow-Off Units for 20" Water Main	Unit	1	1
Blow-Off Units for 36" Water Main	Unit	4	2

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Rock Excavation, Subsurface Structures	C.Y.	1,708	1439
Manhole Sanitary Sewer CO #1	Unit	3	3
Broken Stone or Washed Gravel	C.Y.	1,262	912
6" Corrugated Metal Pipe	L.F.	78	63
15" Corrugated Metal Culvert Pipe (Paved Invert)	L.F.	91	110
12" Reinforced Concrete Culvert Pipe	L.F.	182	204
15" Reinforced Concrete Culvert Pipe	L.F.	657	670
18" Reinforced Concrete Culvert Pipe	L.F.	142	146
21" Reinforced Concrete Culvert Pipe	L.F.	96	99
24" Reinforced Concrete Culvert Pipe	L.F.	194	199
36" Reinforced Concrete Culvert Pipe	L.F.	273	276.5
12" Reinforced Concrete Sewer Pipe	L.F.	25	26
18" Reinforced Concrete Sewer Pipe	L.F.	219	217
21" Reinforced Concrete Sewer Pipe	L.F.	247	247
27" Reinforced Concrete Sewer Pipe	L.F.	243	243.7
36" Reinforced Concrete Sewer Pipe	L.F.	65	65
Manholes		5	4
Manholes, 5' Dia., Sanitary Sewer (U.E.H.)	Unit	1	0
Manholes, Sanitary Sewer (U.E.H.)	Unit	2	1
Drop Manholes, Sanitary Sewer (U.E.H.)	Unit	1	0
Inlets, Type "B"	Unit	21 *	21
Inlets, Type "D"	Unit	7	7
Catch Basins with Trap	Unit	4 *	4
Manholes & Inlets, Additional Depth	L.F.	43.5	37.3
Junction Chamber for Drainage Tunnel	Unit	1	1
Inlets, Type "A"	Unit	1	1
Underdrain Type F	L.F.	1,235	1194
Earth Excavation, Subsurface Structures, Additional Depth (Water Supply)	C.Y.	436	121
20" Steel Water Main	L.F.	340	352.6
36" Steel Water Main	L.F.	1,230	1178.1
6" Cast Iron Water Pipe	L.F.	39	60
8" Cast Iron Water Pipe	L.F.	916	1188
Cast Iron Fittings	Ton	1.6	2.78
6" Gate Valves & Valve Boxes	Unit	3	3
8" Gate Valves & Valve Boxes	Unit	6	6
12"x6" Tapping Sleeves & Valves	Unit	1	1
20"x6" Tapping Sleeves & Valves	Unit	1	1
Relocation of Existing Fire Hydrants	Unit	4	4
20" Gate Valves with 3" Bypass	Unit	2	1
Shutting off Existing Service at Existing Main	Unit	13	11
Transfer of Existing 5/8" Service	Unit	2	0
Temporary Pavement	S.Y.	340	0
Interconnections	Unit	10	9
Plugging & Capping	Unit	2	4
Manholes, 5' Dia., Sanitary Sewer	Unit	1	1
Subbase	C.Y.	214	166
Class "D" Conc. for Thrust Blocks & Supports	C.Y.	0	3.5

LEGEND
- Temporary Pavement
- J.B. - Junction Box
- Lt. - Lighting Standard
- J.B. & Lt. - Junct. Box & Light. Std.
- O/c. - Out-of-Contract
- Sig. - Traffic Control Signal
- L.C. - Load Center

LEGEND
- 15" R.C.C.P. 214.213 L.F.
- 18" R.C.C.P. 103.198 L.F.
- 5 Units Inlets, Type "B"
- 2 Units Inlets, Type "D"

NOTE:
S.B. - Subbase Backfill
S.O.D. - Subbase Outlet Drain (Future Location)
C.D. - Combined Drain

NOTE:
Pipe Trench Cover required as shown on Construction Detail Sh. # 64

SCALE: 1" = 30'

State Of New Jersey
Department Of Transportation
DRAINAGE & UTILITY RELOCATION PLANS
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

25
147
153

0730 025 153

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
(Water Supply)			
6" Cast Iron Water Pipe	L.F.	12	17
8" Cast Iron Water Pipe	L.F.	883	878
Cast Iron Fittings	Ton	1.0	1.13
6" Gate Valves & Valve Boxes	Unit	2	2
8" Gate Valves & Valve Boxes	Unit	7	7
12"x 8" Tapping Sleeves & Valves	Unit	1	1
Relocation of Existing Fire Hydrants	Unit	2	2
Removing Existing Fire Hydrants	Unit	3	1
Transfer of Existing ¾" Service	Unit	2	2
Temporary Pavement	S.Y.	106	0
Interconnections	Unit	7	4
Manholes, 5' Dia., Sanitary Sewer CO#1	Unit	4	4
Class "D" Conc. for Thrust Blocks & Support	C.Y.	0	0.19

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Subbase, Type I	C.Y.	1,158	1140
12" Reinforced Concrete Culvert Pipe	L.F.	44	36
15" Reinforced Concrete Culvert Pipe	L.F.	55	57
18" Reinforced Concrete Culvert Pipe	L.F.	50	50
15" Reinforced Concrete Sewer Pipe	L.F.	46	45
18" Reinforced Concrete Sewer Pipe	L.F.	55	56
36" Reinforced Concrete Sewer Pipe	L.F.	1,195	1190.8
Manholes, 5' Diameter, Sanitary Sewer (U.E.H.)	Unit	4	0
Manholes, Sanitary Sewer (U.E.H.)	Unit	1	0
Inlets, Type "B"	Unit	4 *	4
Catch Basins with Trap	Unit	4 *	4
Manholes & Inlets, Additional Depth	L.F.	40.3	35.7
Manholes with Trap, Sanitary Sewer	Unit	1	1
12" Reinforced Concrete Sewer Pipe	L.F.	30	30
Earth Excav, Subsurface Structures, Add. Depth	C.Y.	1,704	39
8" Corrugated Metal Culvert Pipe	L.F.	3	0
Manhole, Sanitary Sewer CO#1	Unit	1	1

SCALE: 1" = 30'

"CR" 110+74/10'Lt. to "CR" 114+00/10'Lt.
(Water Supply)
Construct:
10-6 L.F. 6" Cast Iron Water Pipe
370-356 L.F. 8" Cast Iron Water Pipe
0.44-0.3 Ton C.I. Fittings
✓1 Unit 6" Gate Valve & Valve Box
✓2 Units 8" Gate Valves & Valve Boxes
✓1 Unit Relocation of Exist. Fire Hydrants
0+Unit Removing Exist. Fire Hydrants
✓1 Unit Transfer of Exist. ¾" Service
0-32 S.Y. Temporary Pavement
1-2 Units Interconnections

"CR" 114+00/10'Lt. to "CR" 117+00/10'Lt
(Water Supply)
Construct:
7-6 L.F. 6" Cast Iron Water Pipe
338-335 L.F. 8" Cast Iron Water Pipe
0.44-0.4 Ton C.I. Fittings
✓1 Unit 6" Gate Valve & Valve Box
✓2 Units 8" Gate Valves & Valve Boxes
✓1 Unit Relocation of Exist. Fire Hydrants
0+Unit Removing Exist. Fire Hydrants
✓1 Unit Transfer of Exist. ¾" Service
0-30 S.Y. Temporary Pavement
1-2 Units Interconnections

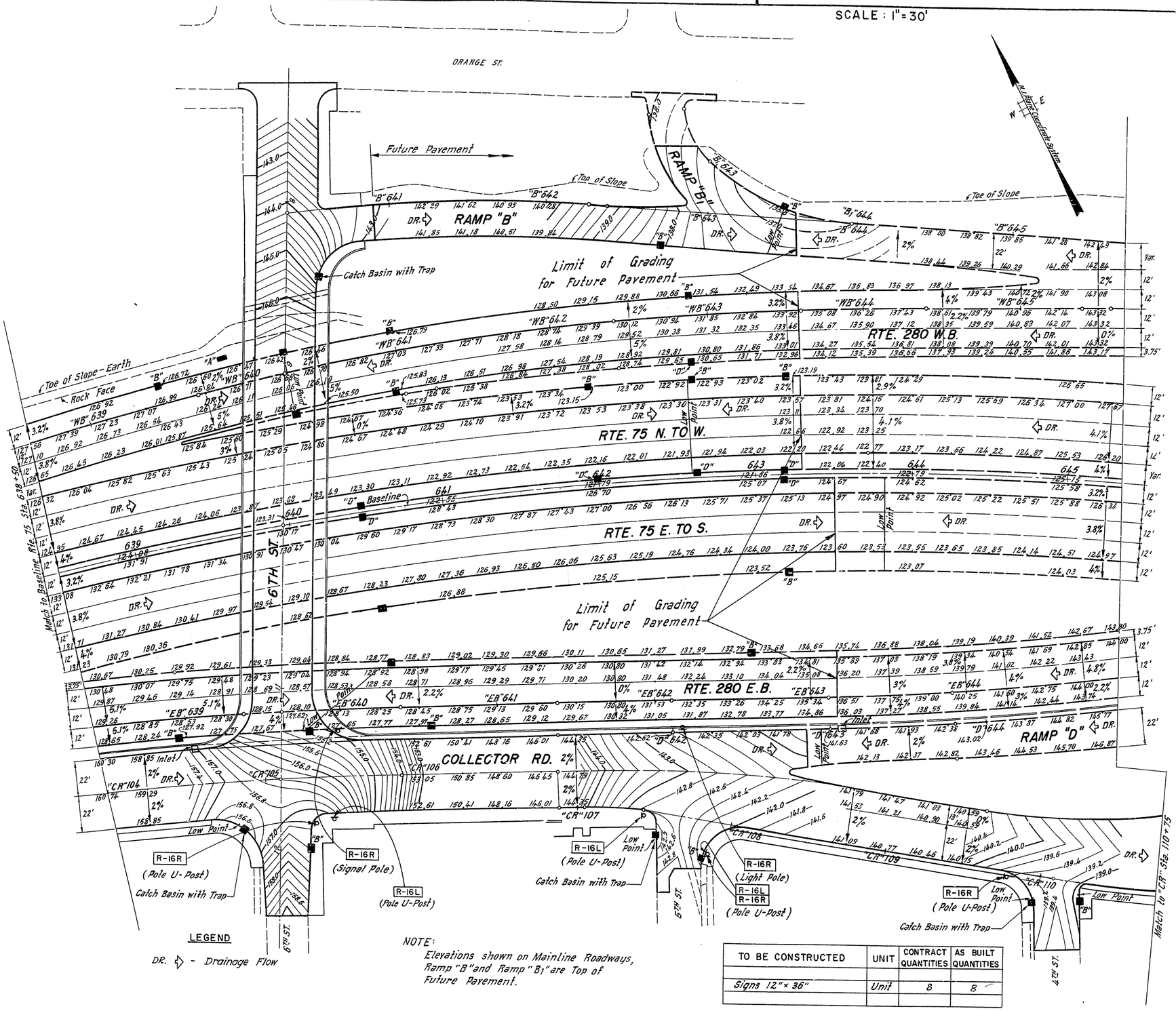
"CR" 110+74/27'Lt. to "CR" 114+00/21'Lt.
Construct:
✓30 L.F. 15" R.C.C.P.
16-15 L.F. 15" R.C.S.P.
✓37 L.F. 18" R.C.S.P.
310-319 L.F. 36" R.C.S.P.
✓1 Unit Manhole 5' Dia., San. Sewer (U.E.H.)
✓1 Unit Inlets, Type "B"
✓1 Unit Catch Basins with Trap
11-9.2 L.F. Manholes & Inlets, Add. Depth
2-3 L.F. 12" R.C.C.P.
✓1 Unit Manhole with Trap, San. Sewer
✓1 Unit Removing Exist. Fire Hydrants
12-455 C.Y. Earth Excav, Subsurf. Struct, Add Depth

"CR" 114+00/21'Lt. to "CR" 117+00/19'Lt.
Construct:
27-25 L.F. 15" R.C.C.P.
✓50 L.F. 18" R.C.C.P.
19-18 L.F. 18" R.C.S.P.
✓301 L.F. 36" R.C.S.P.
✓1 Unit Manhole, 5' Dia., San. Sewer (U.E.H.)
✓2 Units Inlets, Type "B"
✓1 Unit Catch Basin with Trap
✓12.5 L.F. M.H. & Inlets, Add. Depth
2-3 L.F. 12" R.C.C.P.
23-489 C.Y. Earth Excav, Subsurf. Struct, Add Depth

"CR" 117+00/10'Lt. to "CR" 118+24/10'Lt.
(Water Supply)
Construct:
170-192 L.F. 8" C.I. Water Pipe
025-0.3 Ton C.I. Fittings
0-44 S.Y. Temporary Pvt.
✓3 Units 8" Gate Valves & Valve Boxes
✓1 Unit 12"x 8" Tapping Sleeve & Valve
2-3 Units Interconnections

SCALE : 1" = 30'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		28	149
		N. J. - 1 - 28) - 6 (37) 59		153



LEGEND

DR. ⇨ - Drainage Flow

NOTE:
Elevations shown on Mainline Roadways, Ramp "B" and Ramp "B1" are Top of Future Pavement.

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Signs 12" × 36"	Unit	8	8

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made By C.W. Koch Traced by M. Athon Checked by R.A. Larsen

State Of New Jersey
Department Of Transportation
GRADING & SIGNING PLANS
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

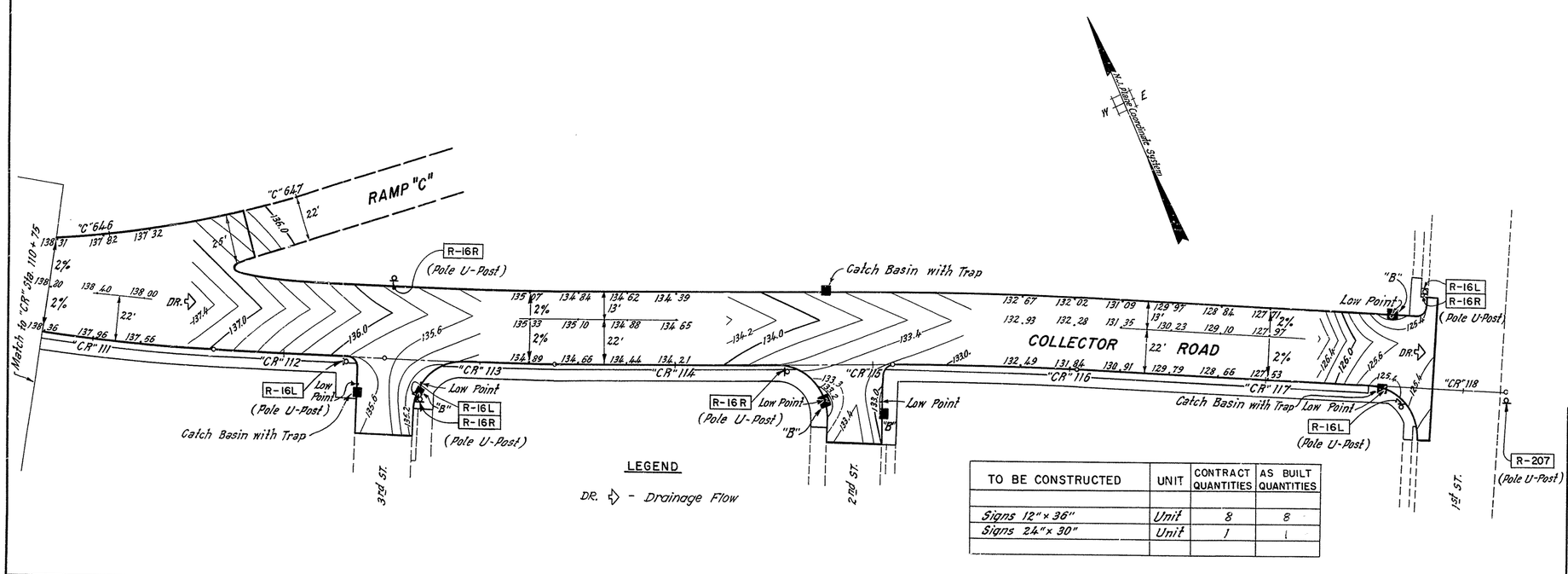
28 / 149 / 153

0730 028 153

SCALE : 1"= 30'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		29	149

N. J. - I - 280 - 6 (37) 59 153



TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Signs 12"x 36"	Unit	8	8
Signs 24"x 30"	Unit	1	1

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by C.W. Koch Traced by M. Athan Checked by R.A. Larsen

State Of New Jersey
Department Of Transportation
GRADING & SIGNING PLANS
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

29
149
153

0730 029 153

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-I-280-6(87)59	N.J.		31	~~149~~ 153

153

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Lighting Standard Assembly Type L-8	Unit	1	1 —
Lighting Standard Assembly L-15	Unit	3	3 —
Junction Box Foundation Class JBF	Unit	3	3 —
16"x36" Junction Box	Unit	11	11 —
Standard Foundation Class "SFT"	Unit	1	2 —
3" Dia. Rigid Metallic Conduit, Type CUG	Lin.Ft.	1,160	978 —
2½" Dia. Rigid Metallic Conduit, Type CUG	Lin.Ft.	880	766 —
1½" Dia. Rigid Metallic Conduit, Type CUG	Lin.Ft.	60	50 —
Controller	Unit	1	0 —
Meter Cabinet, Type T	Unit	1	1 —
Traffic Signal Standard Type T	Unit	2	2 —
Pedestal Assembly TYPE P2	Unit	2	2 —
Traffic Signal Assembly Type C-1	Unit	2	2 —
Traffic Signal Assembly Type 20TA-1	Unit	4	4 —
Signal Wire	Lin.Ft.	6050	6060 —
Multiple Lighting Wire, #2 AWG.	Lin.Ft.	2300	2115 —
Multiple Lighting Wire, #4 AWG.	Lin.Ft.	3000	2626 —
Multiple Lighting Wire, #6 AWG.	Lin.Ft.	3000	2798 —
Pedestal Foundation Class "SPF"	Unit	1	1 —
Ground Wire, #8 AWG, TW	Lin.Ft.	1310	1356 —
~~Traffic Signal~~ Controller (REV. SPEC.)	Unit	1	1 —

NOTES:

1. CONDUITS, CAST IRON JUNCTION BOXES AND SIDEWALK JUNCTION BOXES IN RETAINING WALLS ARE INCLUDED IN BRIDGE ITEMS.
2. FOR SYMBOL LIST SEE SHEET E4.
3. FOR ELECTRICAL WORK IN RETAINING WALLS SEE SHEETS B-44, 45, 47 & 48.
4. FOR ELECTRICAL WORK IN BRIDGE SEE SHEET B-58

E2
15

REVISION	BY	CHK.	DATE

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

31
~~149~~
153

ROUTE 280 SECTION 6K-7C

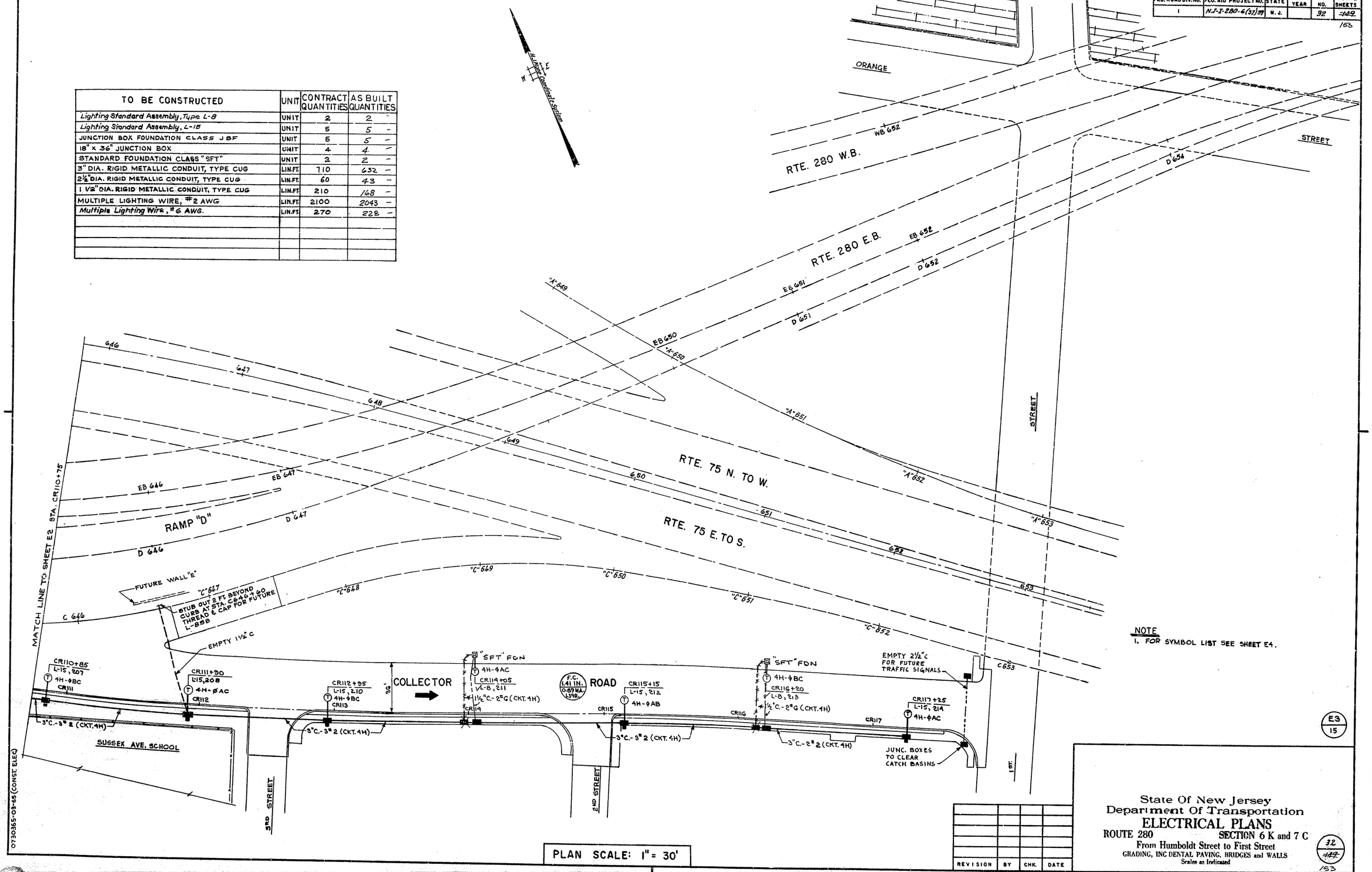
07 30365-03-65 (CONST. ELEC)

0730 031 153

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-I-280-6(37)139	N. J.		92	142

163

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Lighting Standard Assembly, Type L-8	UNIT	2	2 -
Lighting Standard Assembly, L-15	UNIT	5	5 -
JUNCTION BOX FOUNDATION CLASS J BF	UNIT	5	5 -
18" x 36" JUNCTION BOX	UNIT	4	4 -
STANDARD FOUNDATION CLASS "SFT"	UNIT	2	2 -
3" DIA. RIGID METALLIC CONDUIT, TYPE CUG	LIN.FT.	710	632 -
2½" DIA. RIGID METALLIC CONDUIT, TYPE CUG	LIN.FT.	60	43 -
1 1/2" DIA. RIGID METALLIC CONDUIT, TYPE CUG	LIN.FT.	210	168 -
MULTIPLE LIGHTING WIRE, #2 AWG	LIN.FT.	2100	2043 -
Multiple Lighting Wire, #6 AWG.	LIN.FT.	270	228 -



NOTE
1. FOR SYMBOL LIST SEE SHEET E4.

E3
15

PLAN SCALE: 1" = 30'

REVISION	BY	CHK.	DATE

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INC DENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

32
142
153

0730365-03-65 (CONST. ELEC)

ROUTE 280 SECTION 6K-7C

0730 032 153

SCALE : HOR. 1"=50'
VERT. 1"=10'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N.J. - I - 280 - 6 (37) 59	33	153

West Market St. Bridge
℄ Sta. 628+52.22

By Others

Humboldt St. Bridge
℄ Sta. 629+75.11

Myrtle Ave. Bridge
to be constructed under this Contract
℄ Rte. 280 Sta. 632+01.39=
℄ Myrtle Ave. Sta. 10+00.00

Roseville Ave. Bridge
to be constructed under this Contract
℄ Rte. 75 Sta. 634+73.48=
℄ Roseville Ave. Sta. 10+00.00

7th St. Bridge to be constructed under this Contract
℄ Rte. 75 Sta. 637+40.31=
℄ 7th St. Sta. 10+00.00

6th St. Bridge to be constructed under this Contract
℄ Rte. 75 Sta. 639+96.74=
℄ 6th St. Sta. 10+00.00

Bridge Not In Contract

Bridge Not In Contract

Myrtle Ave.

Roseville Ave.

7th St.

6th St.

Existing Ground Line

Profile Future Pavement

Grading Line

+1.638%

2'-3"

-1.757%

2'-3"

15" R.C.C.P.
16" W.I.P.

15" R.C.C.P.
16" W.I.P.

18" R.C.C.P.
16" W.I.P.

P.V.C.

P.V.I.

P.V.T.

V.C. = 480'

K = 2.025'

P.V.I. Elev. = 146.54'

S.S.D. = 4.50'

8' Diameter Drainage Tunnel (By Others)

	628	629	630	631	632	633	634	635	636	637	638	639	640	641
Existing Ground Elev.	165.3	165.8	166.2	166.6	166.7	166.2	165.2	163.9	163.9	163.5	163.8	166.0	164.7	164.5	165.8	165.7	165.0	162.3	158.0	162.4	161.0	157.6	155.1	151.1	151.2	149.5
Grading Line Elev.	140.35	140.60	141.27	141.78	142.10	142.26	142.23	142.03	141.65	141.10	140.37	140.12	139.51	139.24	138.64	138.89	137.78	140.03	136.91	136.04	138.29	135.17	137.42	134.30	136.55	131.70	133.95	131.83	133.08	129.96	132.21	129.09	131.34	128.22	130.47	127.35	129.60	126.48	128.73
Future Finished Grade Elev.	142.51	142.85	143.52	144.03	144.35	144.51	144.48	143.90	143.35	142.62	142.37	141.76	141.49	140.89	140.03	139.16	138.29	135.68	134.82	133.95	133.08	132.21	131.34	130.47	129.60													

DATUM = 30'

+50 | +35 | +50 | +50 | +50 | +75 | +50 | +50 | +50 | +15 | +50 | +65.79 | +50 | +50 | +50 | +50 | +50 | +50 | +50 | +50 | +50 | +50 | +50 | +50 | +50 | +50

℄ 280 E.B. | ℄ 75 E.B.

PROFILE - ROUTE 280 EASTBOUND & ROUTE 75 EASTBOUND

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by R.A. Larsen Traced by M. Athan Checked by J.O. King

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

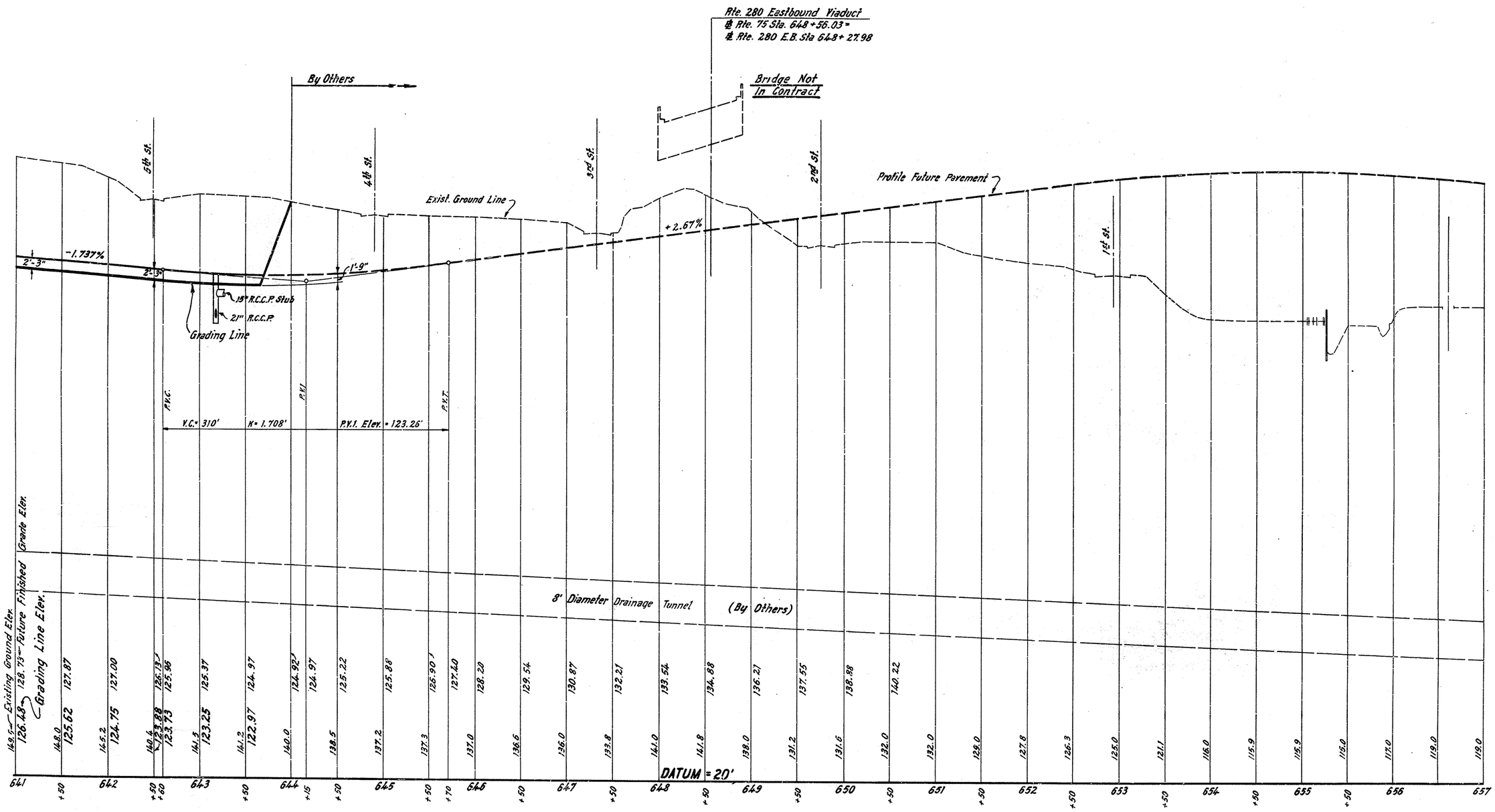
33
~~149~~
153

0730 033 153

SCALE: HOR. 1"=50'
VERT. 1"=10'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		34	~~149~~ 153

N. J. - I - 283 - 6 (37) 39



PROFILE – ROUTE 75 EASTBOUND

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by P.A. Larsen Traced by M. Arbon Checked by J.O. King

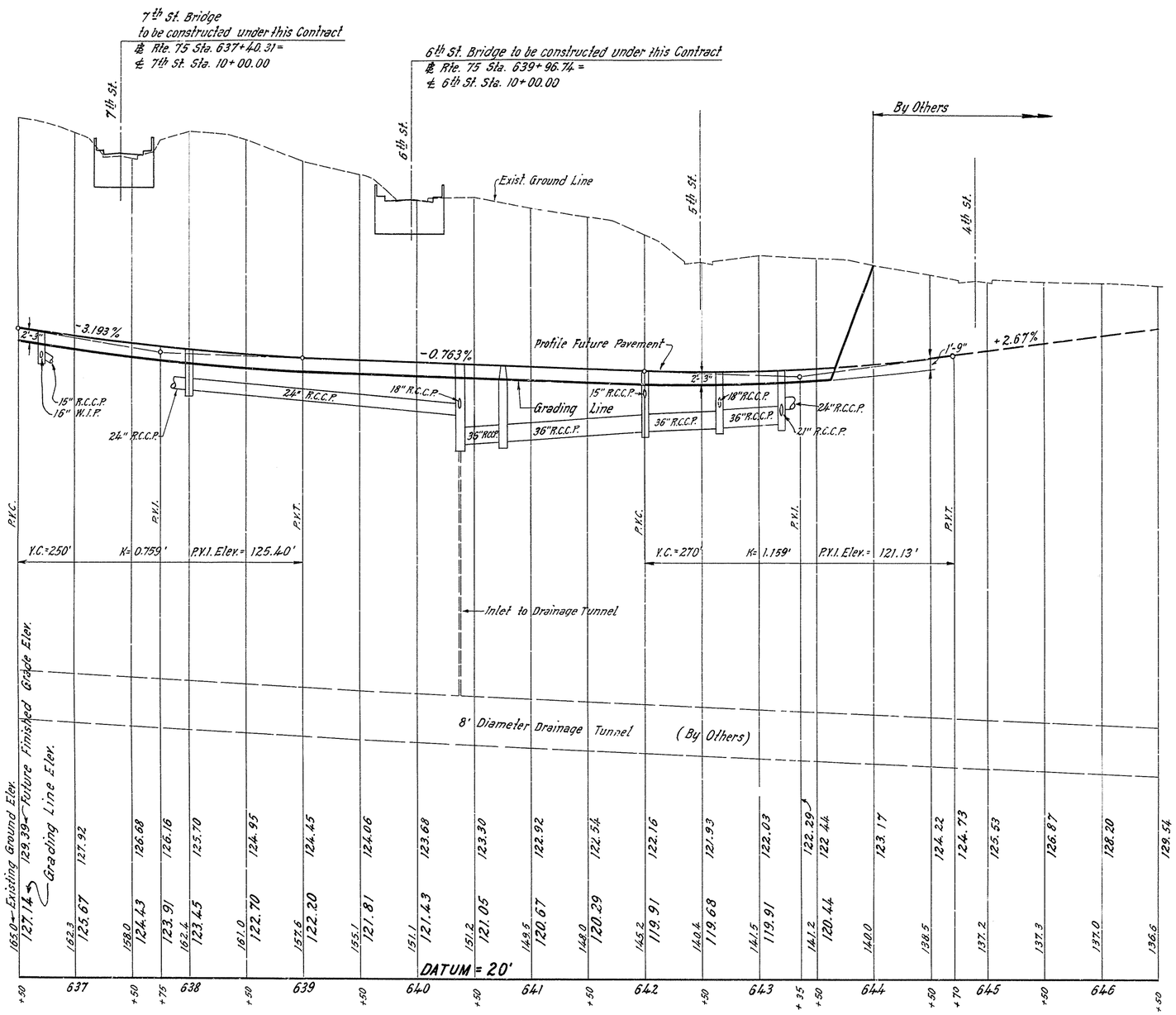
State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INC DENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

34
~~149~~ 153

0730 034 153

SCALE: HOR. 1" = 50'
VERT. 1" = 10'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Tot. Sheets
1	N.J.		36	44
		N. J. - 1 - 28 (- 6) 37) 59		153



PROFILE — ROUTE 75 WESTBOUND

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by R.A. Larsen Checked by M. Athan Checked by J.O. King

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INC DENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

36
149
153

0730 036 153

SCALE: HOR. 1" = 50'
VERT. 1" = 10'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		37	149

N. J. - 1 - 280 - 6 (37) 59 153

℄ Rte. 280 E.B. Sta. 633+65.73 =
℄ Rte. 75 Sta. 633+65.73 / 72' Right

Elevations Controlled by Rte. 75 E.B. Profile
See Grading Plan Sh. # 27

Roseville Ave. Bridge to be constructed under this Contract
℄ Rte. 280 E.B. Sta. 634+49.98 =
℄ Roseville Ave. Sta. 10+76.04

7th St. Bridge
to be constructed under this Contract
℄ Rte. 280 E.B. Sta. 637+13.06 =
℄ 7th St. Sta. 10+87.11

6th St. Bridge to be constructed under this Contract
℄ Rte. 280 E.B. Sta. 639+62.45 =
℄ 6th St. Sta. 11+14.92

By Others

5th St.

4th St.

3rd St.

Exist. Ground Line

+5.0%

2'-3"

15" R.C.C.P.

-2.3%

Profile Future Pavement

Grading Line

15" C.M.P.

1'-9"

P.V.C.

P.V.I.

P.V.T.

V.C. = 520'

K = 4.745'

P.V.I. Elev. = 124.00'

V.C. = 950'

K = 12.350'

P.V.I. Elev. = 176.00'

	633	+50	+65.73	634	+50	635	+50	636	+50	637	+50	638	+15	+50	639	+50	640	+50	+75	641	+50	642	+50	643	+35	+50	644	+50	645	+50	646	+40	+50	647	+50	648
170.6 – Existing Ground Elev.		172.5		169.7		167.1		170.0		170.8		169.3		166.9		162.3		164.6		164.9		159.0		155.8		156.0		154.8		146.5		145.0		141.9		142.0		142.0		141.5		140.6		137.8		138.1		138.0		137.5		136.3		133.9		141.4		143.0
131.48 – Future Finished Grade Elev.																		129.23		128.08		126.28		125.90		125.88		126.20		126.50		126.88		127.90		129.28		131.01		133.34		135.17		137.75		140.25		142.75		145.25		147.75		150.25		152.25		155.05		157.09		158.85
Grading Line Elev.																				130.33		128.53		128.15		128.13		128.45		128.75		129.13		130.15		131.53		133.26		135.34		137.00		137.75								152.74						

Elevations Controlled by Rte. 75 W.B. Profile
See Grading Plan Sh. #27 and #28

℄ Rte. 280 W.B. Sta. 633+65.73 =
℄ Rte. 75 Sta. 633+65.73 / 72' Left

Roseville Ave. Bridge to be constructed under this Contract
℄ Rte. 280 W.B. Sta. 634+96.88 =
℄ Roseville Ave. Sta. 9+24.29

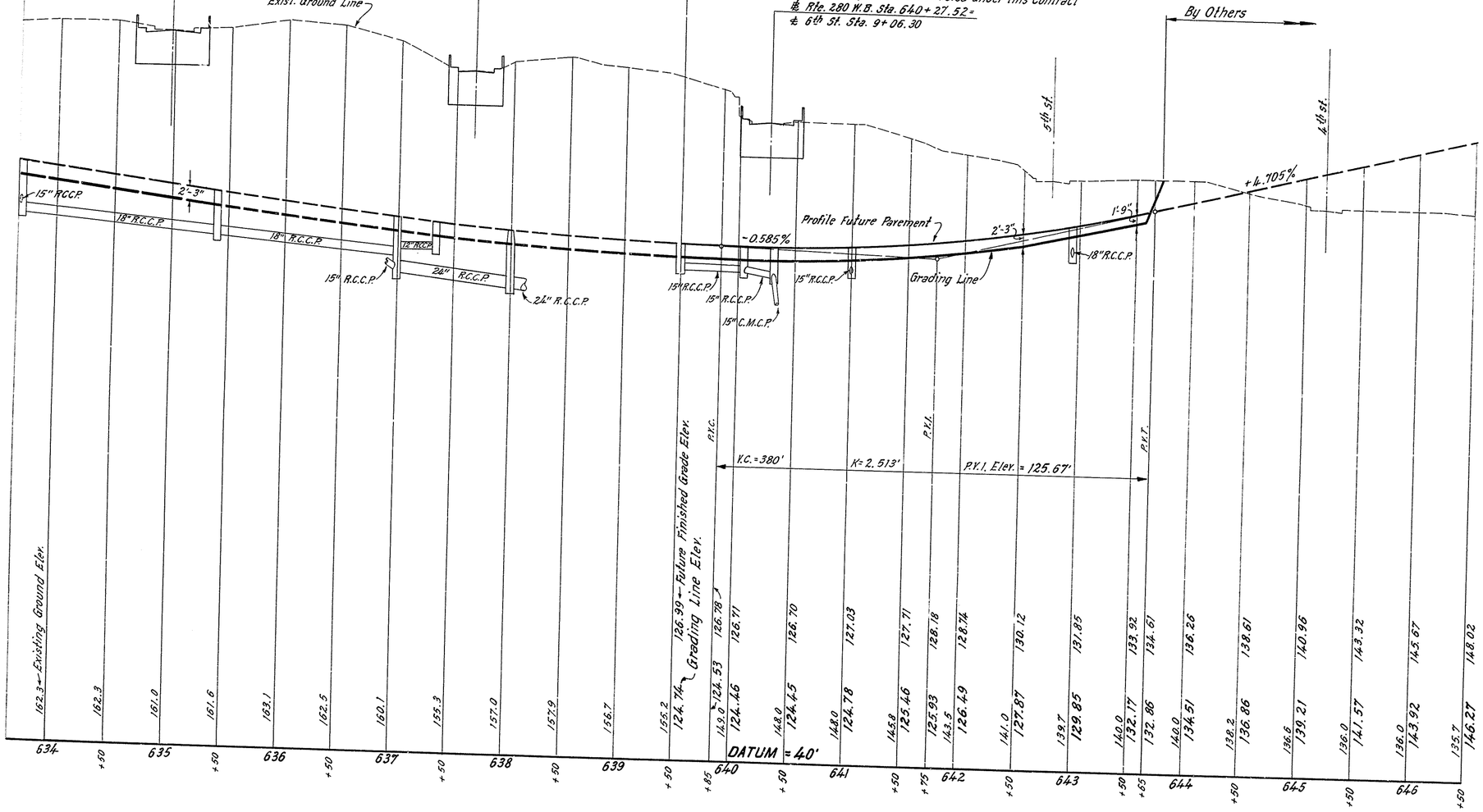
7th St. Bridge to be constructed under this Contract
℄ Rte. 280 W.B. Sta. 637+65.61 =
℄ 7th St. Sta. 9+20.44

6th St. Bridge to be constructed under this Contract
℄ Rte. 280 W.B. Sta. 640+27.52 =
℄ 6th St. Sta. 9+06.30

SCALE: HOR. 1" = 50'
VERT. 1" = 10'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		38	~~147~~ 152

N. J. - I - 280 - 6 (37) 59



PROFILE - ROUTE 280 WESTBOUND

Prepared by PATTERSON, KLEIN & DALLAS
Made by R.A. Larsen Traced by M. Ayhon Checked by J.O. King

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INCIDENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

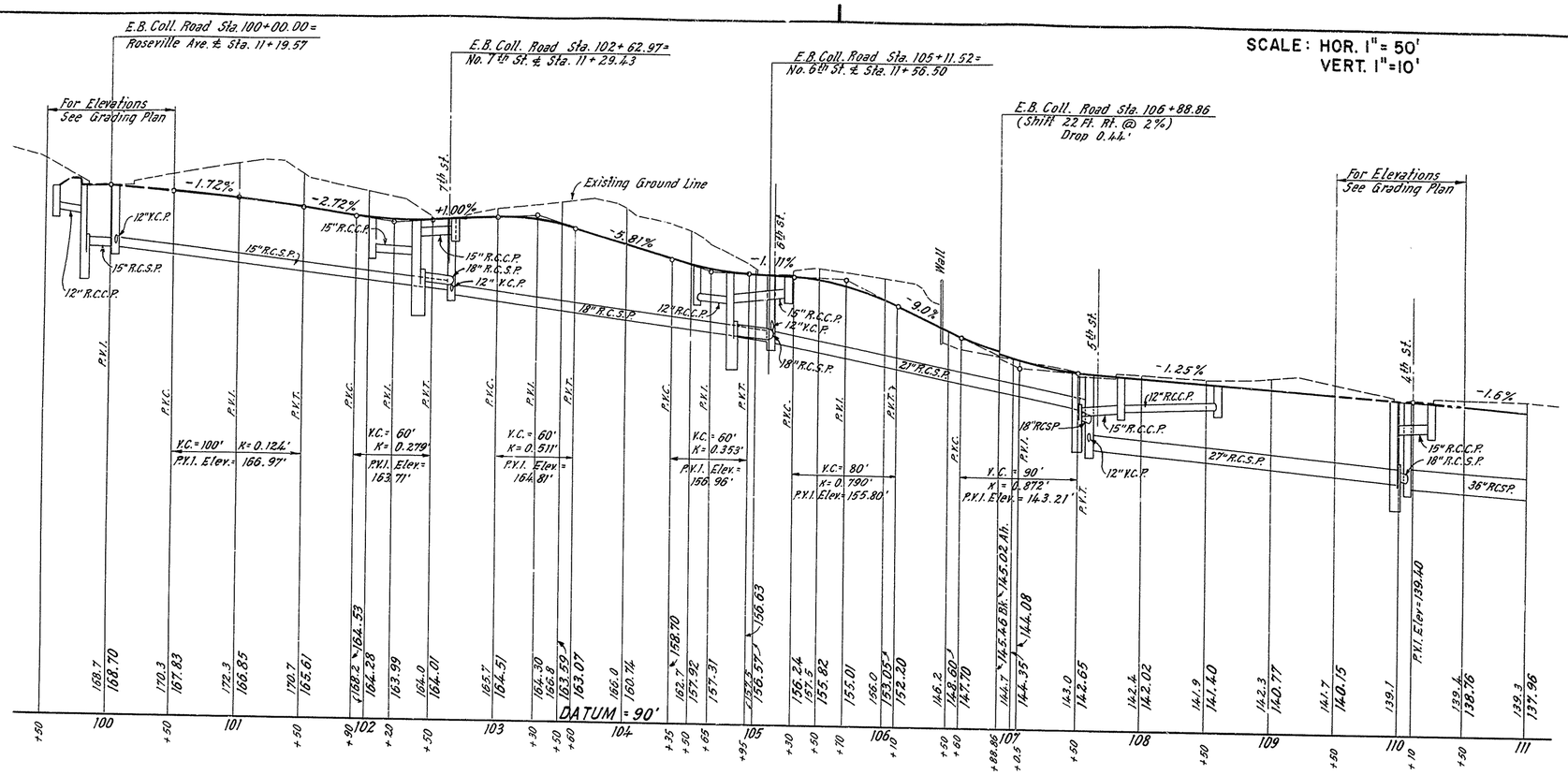
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~~147~~
153

0730 038 153

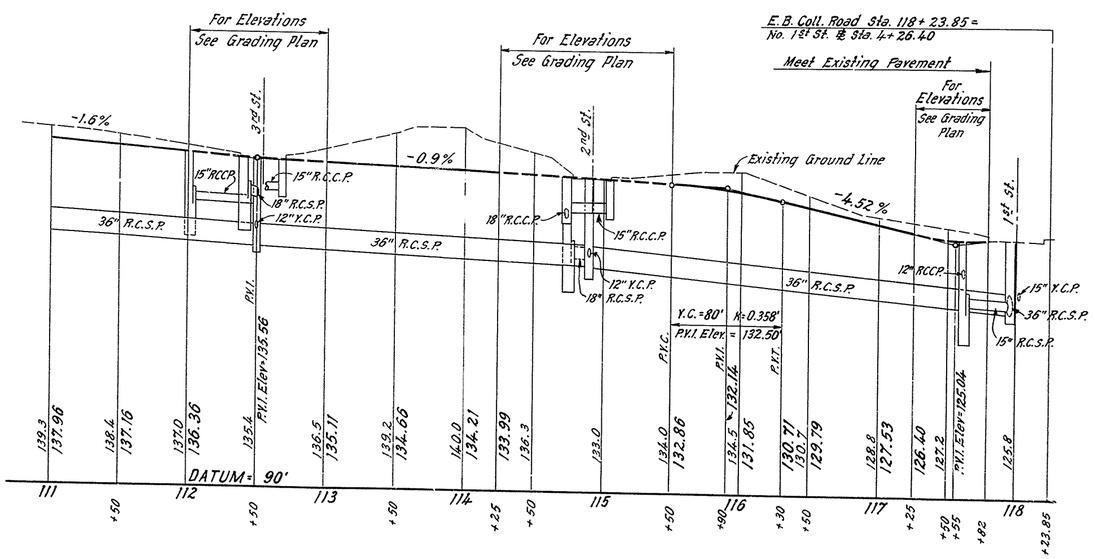
Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		39	149

N. J. - I - 280 - 6 (37) 39 153

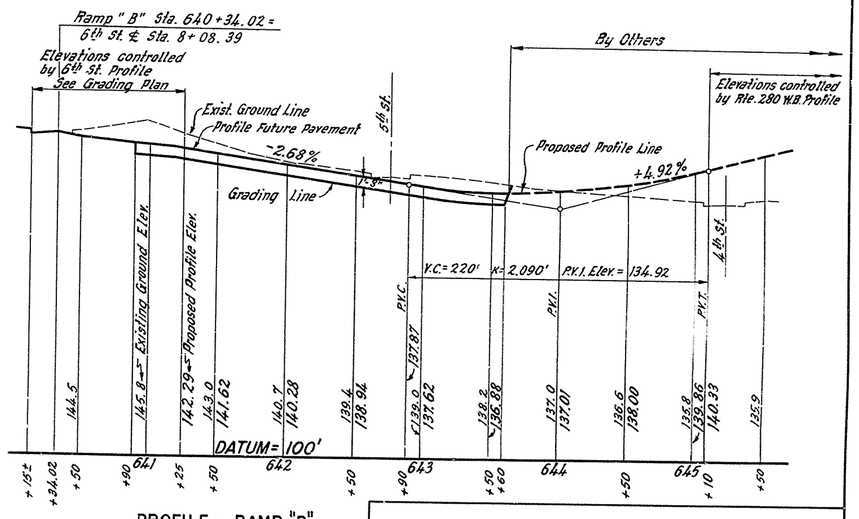
SCALE: HOR. 1" = 50'
VERT. 1" = 10'



PROFILE – COLLECTOR ROAD



PROFILE – COLLECTOR ROAD



PROFILE – RAMP "B"

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 6 K and 7 C
From Humboldt Street to First Street
GRADING, INC DENTAL PAVING, BRIDGES and WALLS
Scales as Indicated

39
149
153

Prepared by M. Arhan ... J.O. King
Drawn by R.A. Larsen

0730 039 153

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N.J.-I-280-6(38)59	1	117

C.S. Nº 0730

SHEET NO.	INDEX OF SHEETS
1	KEY SHEET
2	ESTIMATE OF QUANTITIES
3-6	DISTRIBUTION OF QUANTITIES
7-10	TYPICAL SECTIONS
11-14	ALIGNMENT
15-23	GENERAL PLANS
24-31	GRADING, SIGNING AND LANDSCAPING PLANS
32-38	ELECTRICAL PLANS
39-48	PROFILES
49-80	CROSS SECTIONS
81-112	CONSTRUCTION DETAILS
113-117	SIGN STRUCTURES

sheets 1-112 received in Newark office 07/27/71 Hang>

UTILITY COMPANIES	
PUBLIC SERVICE ELECTRIC & GAS COMPANY	— GAS & ELECTRIC
NEW JERSEY BELL TELEPHONE COMPANY	— TELEPHONE
NEWARK MUNICIPAL UTILITIES AUTHORITY	— WATER

State of New Jersey
Department of Transportation

AS-BUILT PLANS OF

ROUTE 280 SECTIONS 6L & 7E → 0730

From Grove Street to Fourth Street

PAVING, SIGNS, LIGHTING and PLANTING

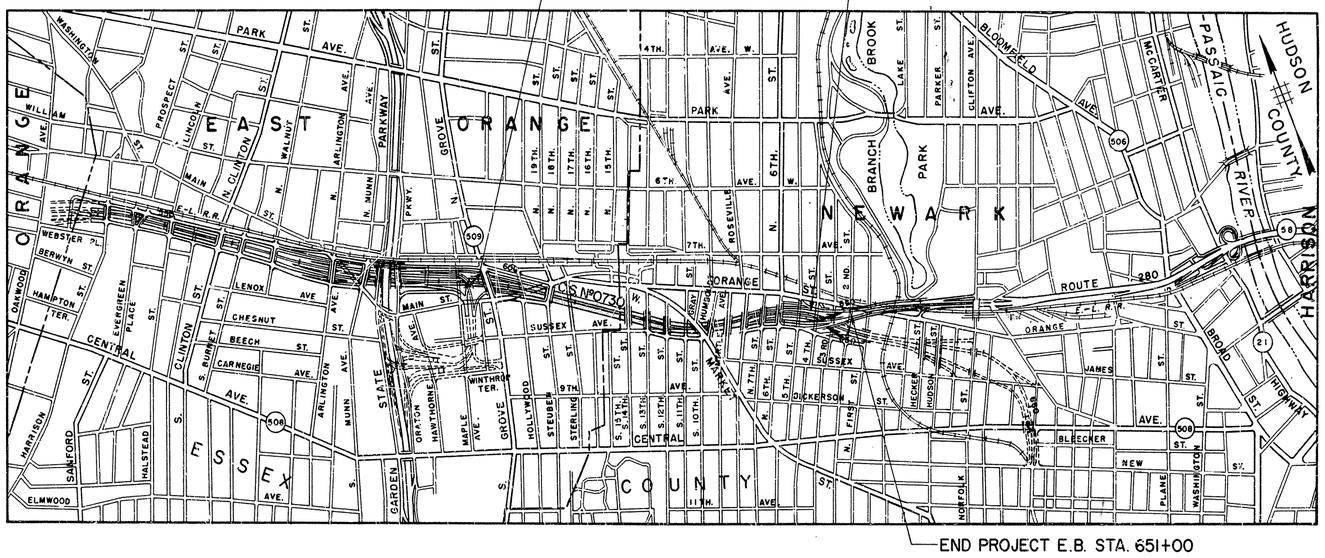
Cities of East Orange and Newark — Essex County

Scales as Indicated — February 1971

47-15

BEGIN PROJECT STA. 596+00.00
BEGIN FEDERAL PROJECT NO. N.J.-I-280-6(38)59
STA. 596+50.00 RTE. 280 ℄

END FEDERAL PROJECT NO. N.J.-I-280-6(38)59
E.B. STA. 643+16.00



C.S. 0730

Resident Engineer - Henry T. Espersen
Contractor - Frapaul Construction Co., Inc.
Date Construction Started: July 8, 1971
Date Construction Completed - May 18, 1972

As-Builts Prepared by
Newark Surface Design
August 1973

Rod Field Books:
As-built Profiles Bk. 1747 Pg. 16 Rt. - 21 Rt.
Monument Ties Bk. 1928 Pg. 21 Lt. - 24 Rt.
Inlet Layout Ramp "C" Bk. 1928 Pg. 20 Lt. & Rt.

DESIGN DATA	
ADT 1965	= 44,400
ADT 1975	= 105,000
DHV 1975	= 10,750
D	= 55 %
T	= 2 %
V	= 50

PARSONS, BRINCKERHOFF, QUADE, & DOUGLAS
ENGINEERS
TRENTON, N.J.

KEY MAP

SCALE: 1" = 1,000'

STANDARD HIGHWAY SPECIFICATIONS OF 1961 TO GOVERN

LENGTH OF PROJECT = 5,500.00 LIN. FT. = 1.042 MILE

LENGTH OF FEDERAL PROJECT NO. N.J.-I-280-6(38)59 = 4,666.00 LIN. FT. = 0.884 MILE

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS
APPROVED
Division Engineer — Date

Submitted by _____ 4/12/71
Director of Design, Transportation — Date

Approved by _____ 4-13-71
State Highway Engineer — Date

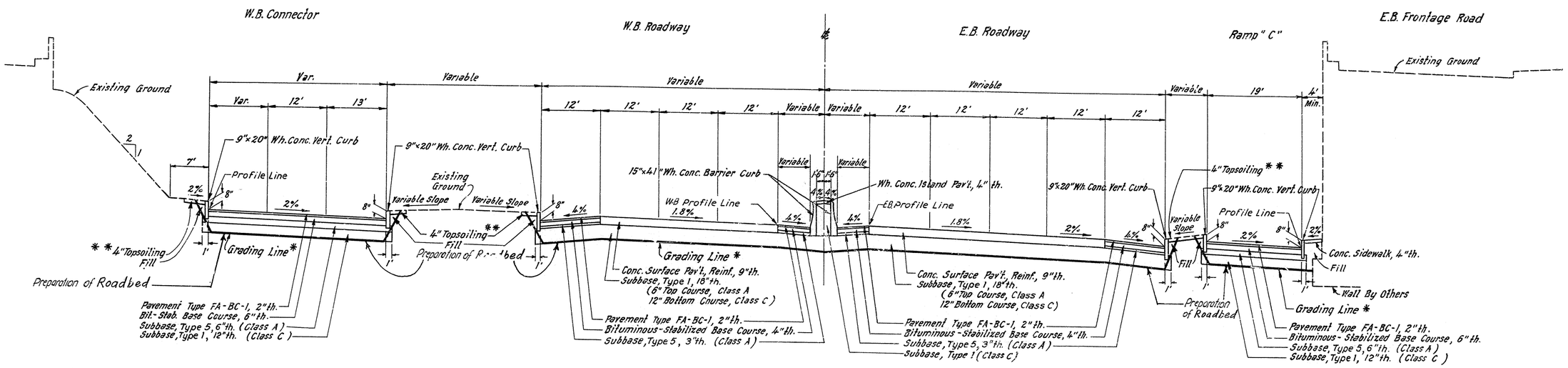
Approved by _____ 4-14-71
Commissioner of Transportation — Date

1/117

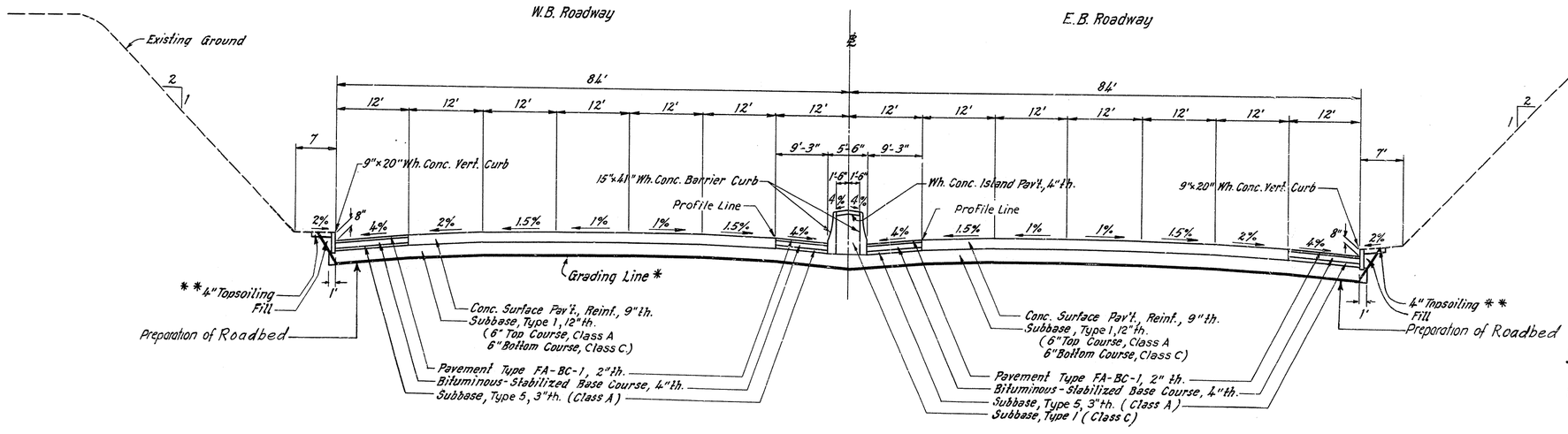
0730 00E 117

NOT TO SCALE

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (38) 59	7	117



TYPICAL CROSS SECTION - SUPERELEVATED - VIC. ℄ STA. 600 + 00



TYPICAL CROSS SECTION - NORMAL - VICINITY ℄ STA. 612 + 00

Height of Fill	Side Slope	V.C.	Dist. to P.V.I.
0'-5'	6:1	4'	2'
5'-9'	4:1	6'	3'
9' and above	2:1	6'	7'
Cut	2:1	6'	7'

NOTE:

1. For variations see Cross Sections and Plan Sheets.

2. Pav't. type FA-BC-1, 2" Thick will be paid for as pav't. type FA-BC. This will apply to all Typical Sections sheets.

* Grading Line for Roadway - Under Previous Contract.

** 4" Topsoiling, Fertilizing & Seeding, Type A, & Hay Mulching.

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by R. Larsen Traced by M. Athan Checked by L. King

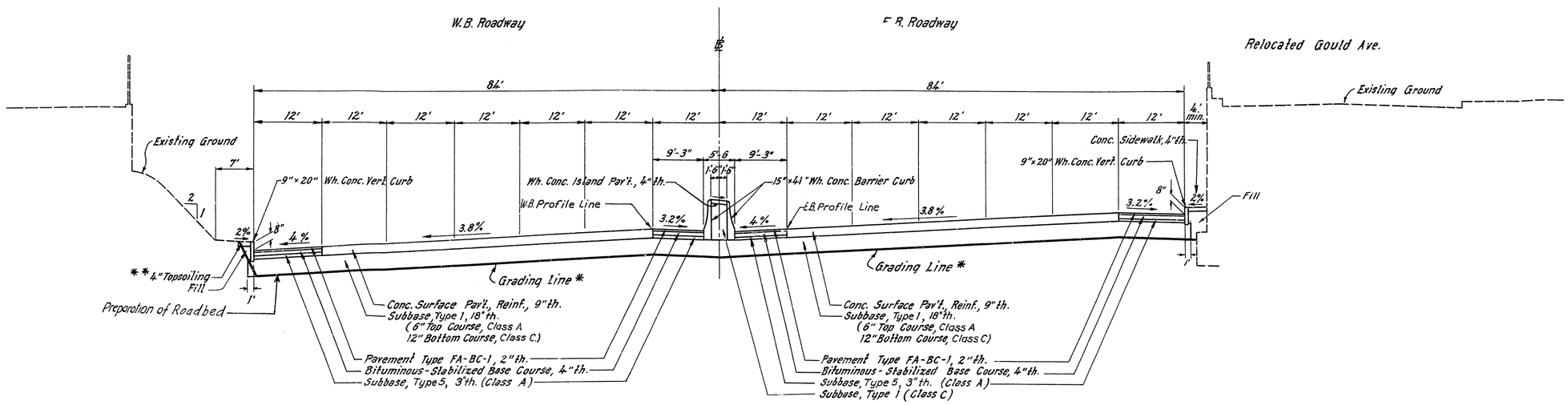
State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTIONS 6 L & 7 E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

7
117

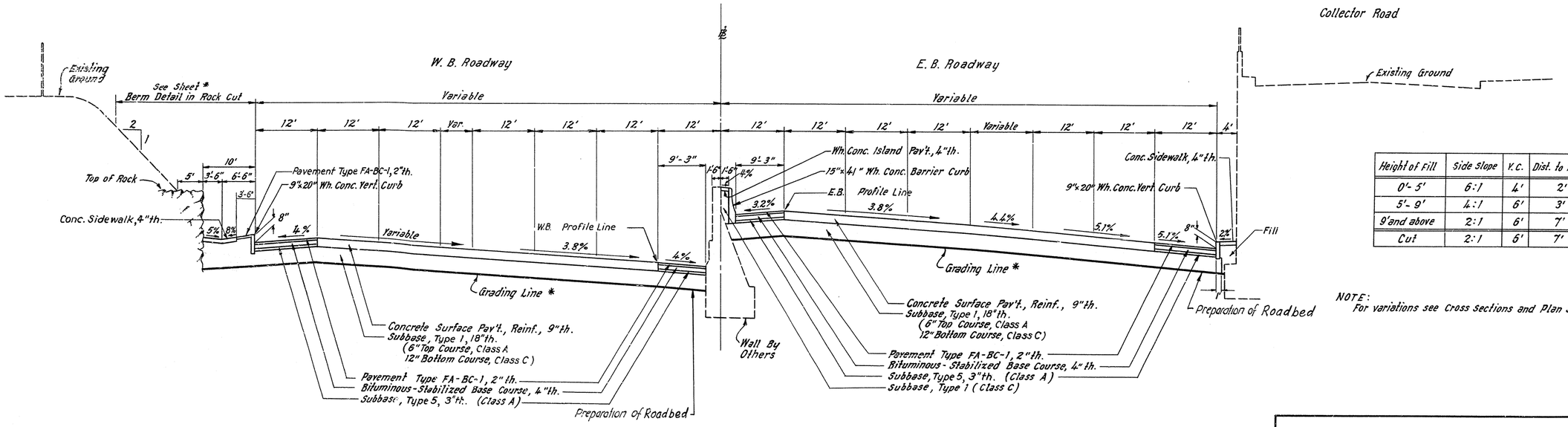
0730 007 117

NOT TO SCALE

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - 1 - 280 - 6 (38) 59	8	117



TYPICAL CROSS SECTION - SUPERELEVATED - VICINITY ℄ STA. 625 + 00



Height of Fill	Side Slope	V.C.	Dist. to P.V.I.
0'- 5'	6:1	4'	2'
5'- 9'	4:1	6'	3'
9' and above	2:1	6'	7'
Cut	2:1	6'	7'

NOTE:
For variations see Cross sections and Plan Sheets.

* Grading Line for Roadway - Under Previous Contract.

** 4" Topsoiling, Fertilizing & Seeding, Type A, & Hay Mulching.

TYPICAL CROSS SECTION - SUPERELEVATED - VICINITY ℄ STA. 638 + 00

State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTIONS 6 L & 7 E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

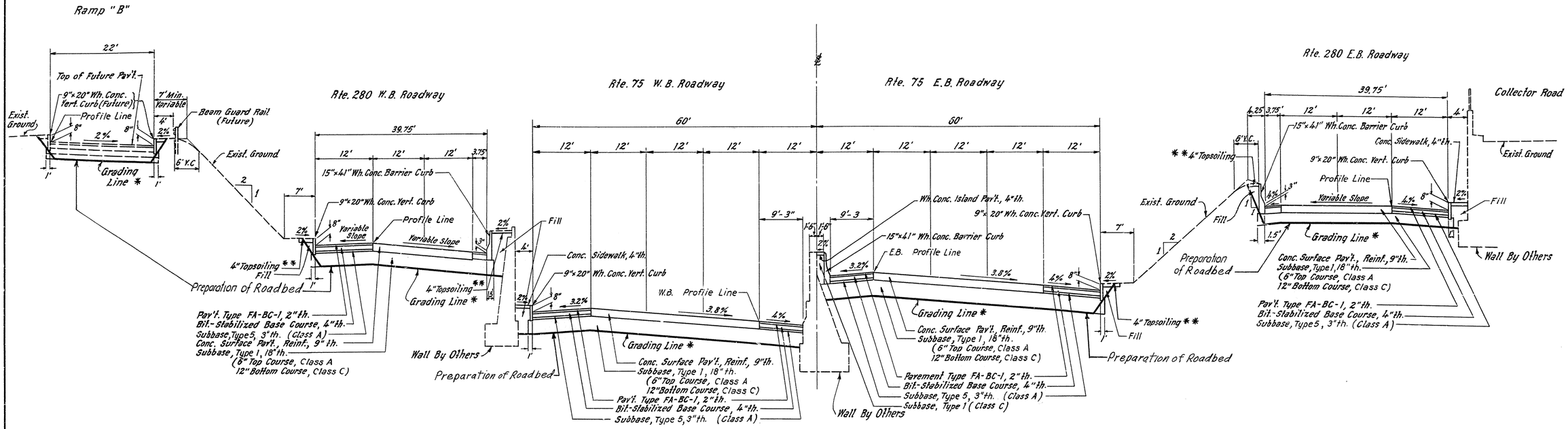
8
117

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by R. Larsen Traced by M. Alban Checked by L. King

0730 008 117

NOT TO SCALE

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N.J. - I - 280 - 6 (38) 59	9	117



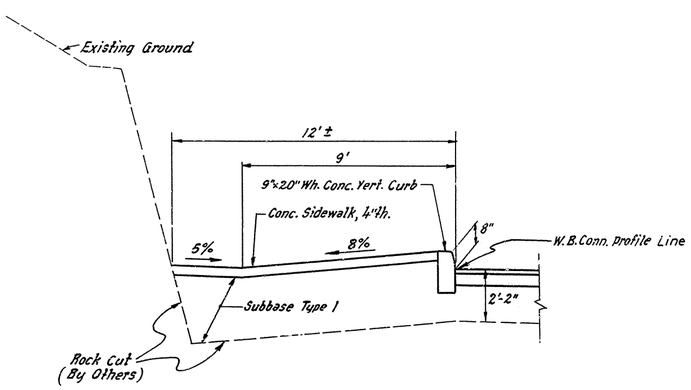
TYPICAL CROSS SECTION - VICINITY ℄ STA. 642 + 50

Height of Fill	Side Slope	V.C.	Dist. to P.V.I.
0'- 5'	6:1	4'	2'
5'- 9'	4:1	6'	3'
9' and above	2:1	6'	7'
Cut	2:1	6'	7'

NOTE:
For variations see Cross Sections and Plan Sheets.

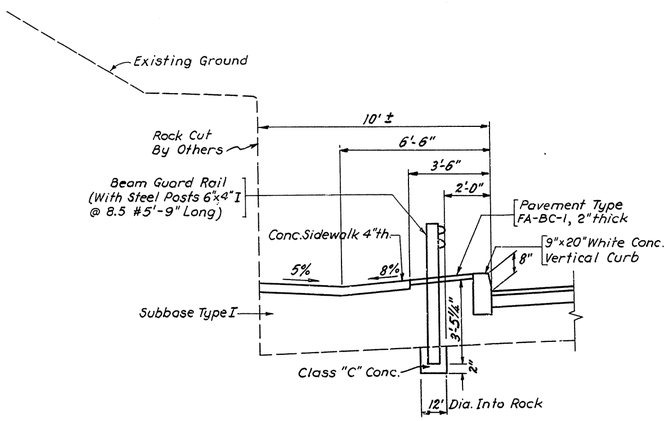
* Grading Line for Roadway - Under Previous Contract.

** 4" Topsoiling, Fertilizing & Seeding, Type A, & Hay Mulching.



BERM DETAIL IN ROCK CUT

W.B. Connector Sta. 596+25 to Rock Runout
Ramp "A" Sta. 596+25 Right to Rock Runout



BERM DETAIL IN ROCK CUT

Route 280 W.B. Sta. 635+75± to Sta. 640+65± Left

State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTIONS 6 L & 7 E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

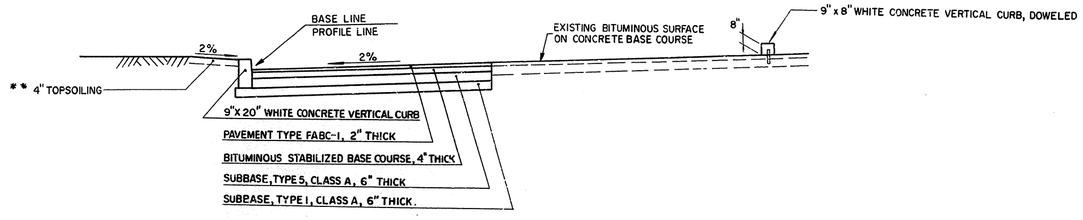
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Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by: R. Larsen Traced by: W. Allen Checked by: J. King

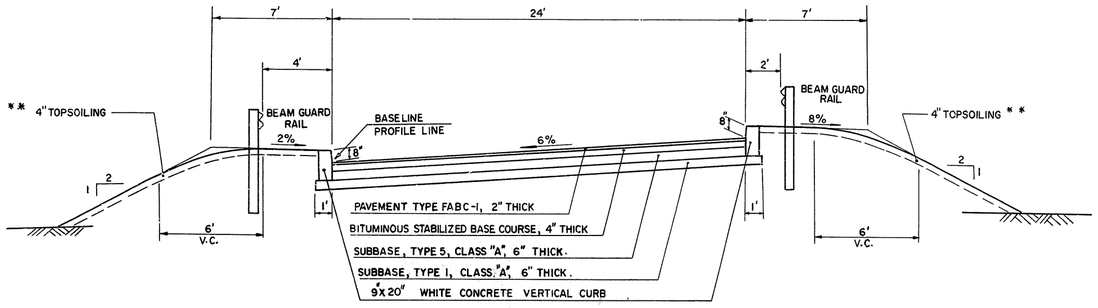
0730 009 117

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		10	117

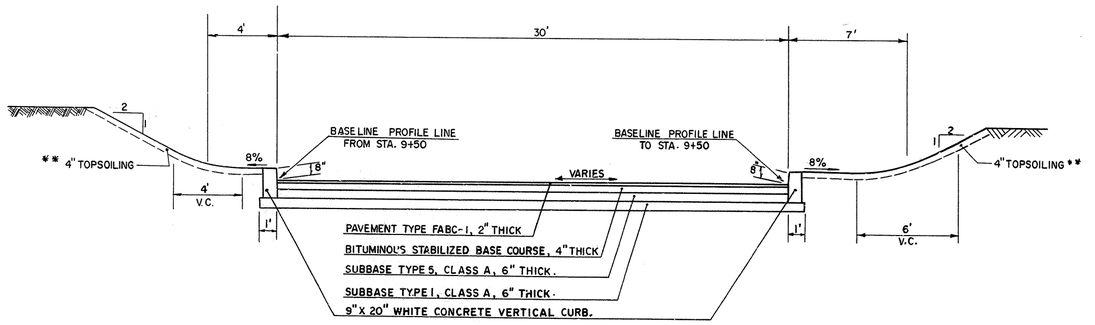
N. J. - I - 280 - 6 (38) 59



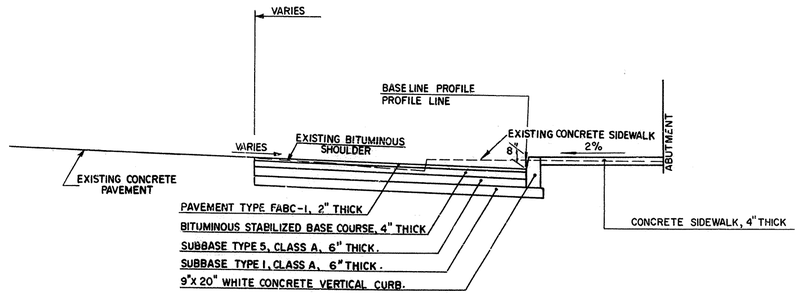
RAMP "TE"
Vicinity Sta. 10+50



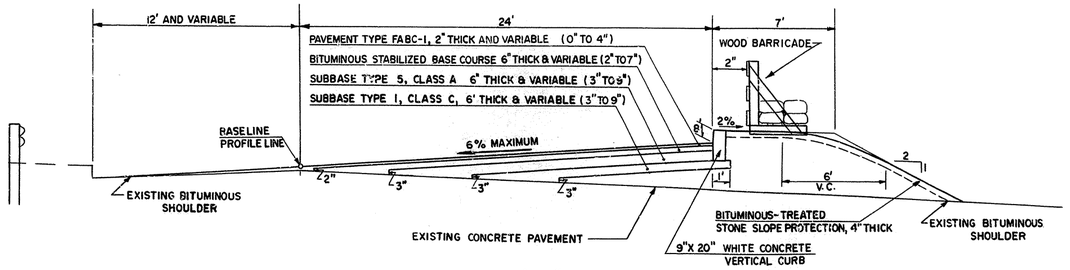
RAMP "TW"
Vicinty Sta. 9+50



RAMP "TE"
Vicinity Sta. 9+50



RAMP "TE"
Vicinity Sta. 7+50



RAMP "TW"
Showing Overlay Pavement
Vicinity Sta. 7+50

Note: For variations see Cross Sections and Plan Sheets

** 4" Topsoiling, Fertilizing & Seeding, Type A, & Hay Mulching

SCALE : 1" = 4'

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by GEP Traced by BF Checked by GEP

State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTIONS 6L & 7E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

10
117

0730 010 117

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (38) 59	13	117

ALIGNMENT DATA

POINT	LINE	COORDINATES NORTH	COORDINATES EAST
P.O.C. "℄ 75"+3	Route 75 Baseline	699, 349. 722	2, 131, 860. 170
P.C.C. "℄ 75-15-16"	" " "	699, 014. 315	2, 132, 515. 129
P.C.C. "℄ 75-16-17"	" " "	698, 954. 224	2, 132, 594. 557
P.T. "℄ 75-17"	" " "	696, 892. 091	2, 132, 672. 911
P.C.C. "WBM-14-15"	Route 15 West Median	699, 217. 825	2, 132, 212. 610
P.C.C. "WBM-15-16"	" " " "	699, 033. 712	2, 132, 505. 135
P.C.C. "WBM-16-17"	" " " "	698, 972. 341	2, 132, 584. 085
P.T. "WBM-17"	" " " "	698, 909. 597	2, 132, 661. 951
P.C.C. "EBM-14-15"	Route 15 East Median	699, 071. 835	2, 132, 413. 657
P.C.C. "EBM-15-16"	" " " "	698, 902. 451	2, 132, 648. 948
P.T. "EBM-16"	" " " "	696, 847. 290	2, 132, 719. 341
P.C.C. "280WB-2-3"	Route 280 Westbound	699, 469. 743	2, 131, 731. 356
P.C.C. "280WB-3-4"	" " "	699, 446. 150	2, 131, 848. 939
P.O.C. "280WB" 3	" " "	699, 432. 500	2 131, 904. 082
P.C.C. "280 WB-4-5"	" " "	699, 364. 417	2, 132, 104. 842
P.C.C. "280WB-5-6"	" " "	699, 315. 434	2, 132, 214. 373
P.C.C. "280WB-6-7"	" " "	699, 280. 077	2, 132, 286. 135
P.T. "280WB-7"	" " "	699, 234. 540	2, 132, 375. 164
P.C. "280 WB-	" "	698, 225. 915	2, 132, 391. 820
P.C.C. "280WB^6	" "	699, 180. 378	2, 132, 480. 849
P.C.C. "280 EB-3-4"	Route 280 East Bound	699, 258. 073	2, 131, 784. 425
P.O.C. "280 EB" 3	" " " "	699, 248. 201	2, 131, 806. 316
P.C.C. "280 EB-4-5"	" " " "	699, 216. 103	2, 131, 875. 188
P.T. "280 EB-5"	" " " "	699, 172. 550	2, 131, 965. 205
P.C. "280 EB-6	" " " "	699, 140. 285	2, 132, 031. 050
P.C.C. "280 EB-6-7"	" " " "	699, 096. 732	2, 132, 121. 067
P.C.C. "280 EB-7-8"	" " " "	699, 062. 974	2, 132, 193. 595
P.C.C. "280 EB-8-9"	" " " "	699, 016. 431	2, 132, 304. 185

CURVE DATA

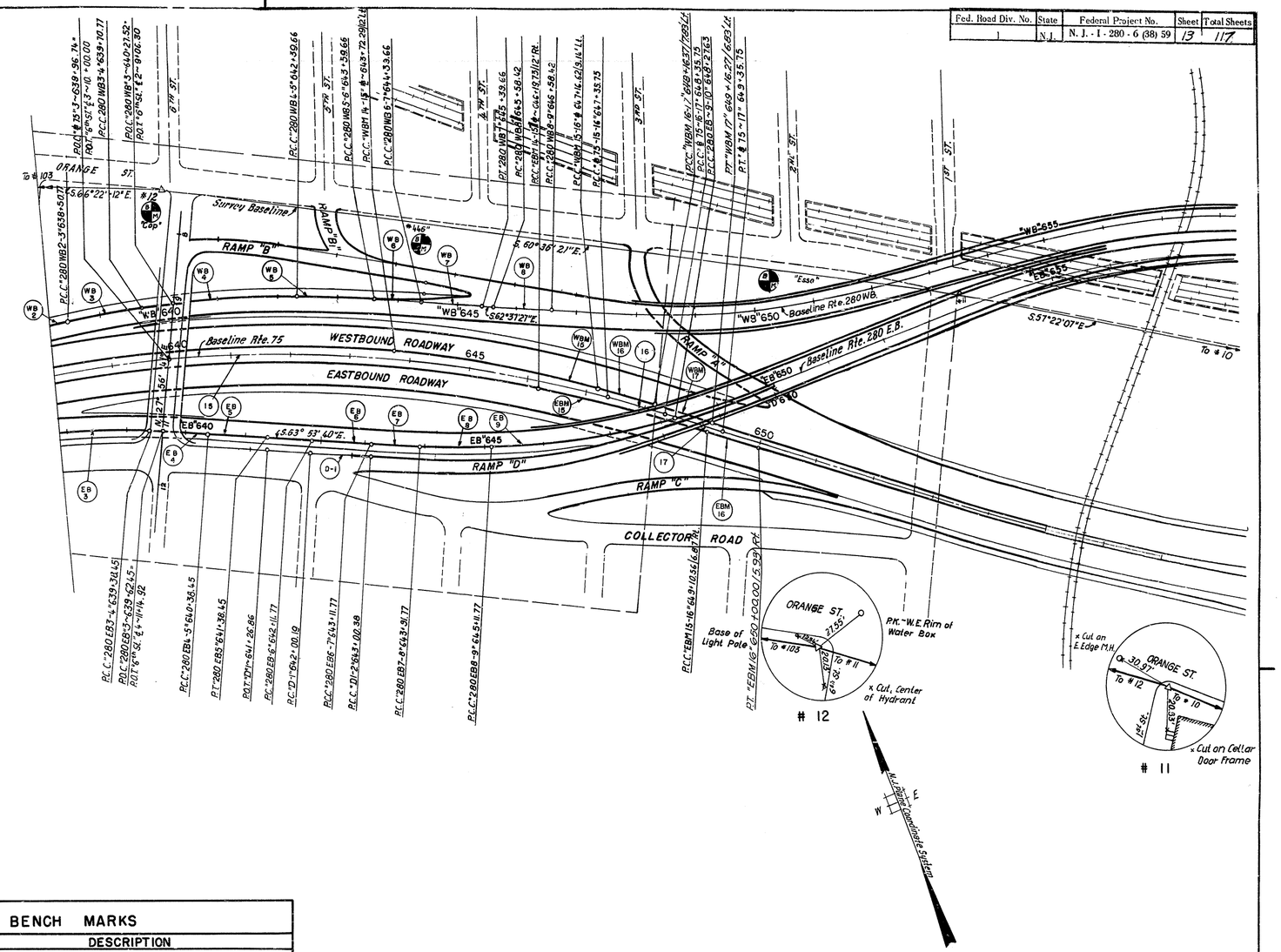
CURVE	Δ	R	L	T	E	COORDINATES OF CENTER NORTH	COORDINATES OF CENTER EAST
"℄ 15"	26° 37' 51"	2, 200'	1, 022. 56'	520. 69'	60. 78'	697, 250. 946	2, 131, 200. 518
"℄ 16"	1° 25' 57"	4, 000'	100. 00'	50. 00'	0.31'	695, 807. 649	2, 130, 124. 928
"℄ 17"	0° 34' 23"	10, 000'	100. 00'	50. 00'	0.13'	691, 087. 787	2, 126, 420. 485
℄ "WBM-15"	9° 54' 51"	2, 000'	346. 07'	173. 47'	7.51'	697, 439. 453	2, 131, 297. 518
℄ "WBM-16"	1° 25' 57"	4, 000'	100. 00'	50. 00'	0.31'	695, 845. 195	2, 130, 089. 901
℄ "WBM-17"	0° 34' 23"	10, 000'	100. 00'	50. 00	0.13'	691, 154. 475	2, 126, 348. 624
℄ "EBM-15"	4° 09' 13"	4, 000'	289. 98'	145. 05'	2.63'	695, 742. 970	2, 130, 195. 853
℄ "EBM-16"	0° 30' 45"	10, 000'	89. 43'	44. 72'	0.10'	691, 003. 749	2, 126, 516. 209
"WB - 3"	3° 07' 31"	2, 200'	120. 00'	60. 02'	0.82'	697, 301. 637	2, 131, 357. 758
"WB - 4"	9° 37' 45"	1, 600'	268. 90'	134. 77'	5.67'	697, 886. 548	2, 131, 491. 733
"WB - 5"	3° 07' 31"	2, 200'	120. 00'	60. 02'	0.82'	697, 332. 347	2, 131, 261. 817
"WB - 6"	1° 08' 45"	4, 000'	80. 00'	40. 00'	0.20'	695, 709. 821	2, 130, 482. 453
"WB - 7"	0° 34' 23"	10, 000'	100. 00'	50. 00'	0.13'	690, 354. 436	2, 127, 776. 930
"WB - 8"	0° 34' 23"	10, 000'	100. 00'	50. 00'	0.13'	708, 106. 019	2, 136, 930. 054
"EB - 4"	1° 25' 57"	4, 000'	100. 00'	50. 00'	0.31'	695, 606. 742	2, 130, 151. 090
"EB - 5"	0° 34' 23"	10, 000'	100. 00'	50. 00'	0.13'	690, 192. 700	2, 127, 564. 943
"EB - 6"	0° 34' 23"	10. 000'	100. 00'	50. 00'	0.13'	708, 120. 134	2, 136, 431. 313
"EB - 7"	1° 08' 45"	4, 000'	80. 00'	40. 00'	0.20'	702, 706. 093	2, 133, 845. 166
"EB - 8"	3° 07' 31"	2, 200'	120. 00'	60. 02'	0.82'	701, 066. 689	2, 133, 101. 959
"EB - 9"	15° 04' 52"	1, 200'	315. 86'	158. 85'	10.47'	700, 134. 754	2, 132, 739. 334

BENCH MARKS

NAME	ELEV.	DESCRIPTION
MYRTLE	154.853'	x Cut on Northerly Bolt of Hydrant at S.W. Corner of Myrtle Ave. & Orange St. - Newark, N.J.
"Rv. 548"	148.298'	Standard Monel Metal Rivet, set at the Main Entrance of the Old Essex Troop Armory, in the North end of the Cheek Wall, 0.65' East of the face of Bldg. and North of Orange St. - Newark, N.J.
"Cop"	143.634'	□ Cut East End, 1st Step at the Entrance to 5th Precinct Station. S.W. Corner of 6th St. and Orange St. - Newark. N.J.
# 446 ORANGE	137.705	□ Cut in East End of 1st Stone Step at Upstairs Entrance to House # 446, Orange St. - Newark, N. J.
"ESSO"	130.773	x Cut on N.W. Bolt of Hydrant, Located at S.E. Corner of 2nd St. and Orange St. - Newark, N.J.

SURVEY BASELINE DATA

POINT	COORDINATES NORTH	COORDINATES EAST
# 104	699, 957. 924	2, 131, 114. 040
# 103	699, 812. 850	2, 131, 473. 042
# 102	699, 540. 829	2, 131, 371. 057
# 101	699, 327. 558	2, 131, 263. 776
# 12	699, 603. 509	2, 131, 951. 524
# 11	698, 942. 776	2, 133, 124. 414
# 10	698, 365. 136	2, 134, 026. 555



SCALE: 1" = 100'

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by Ashtekar Traced by M. Attari Checked by R. Larsen

State Of New Jersey
Department Of Transportation
ALIGNMENT
ROUTE 280 SECTIONS 6 L & 7 E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

13
117

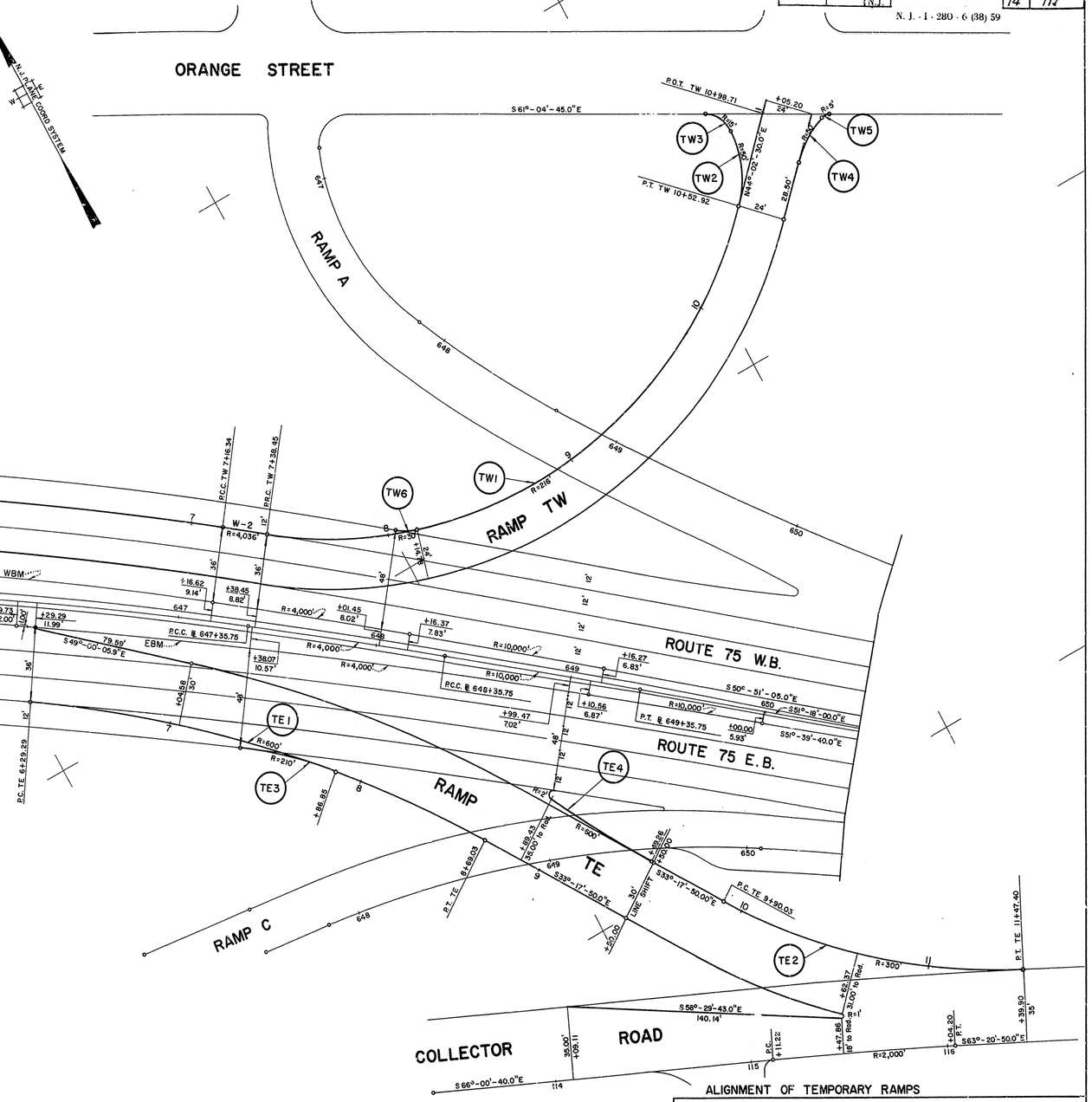
0730 013 117

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		14	117

N. J. - I - 280 - 6 (38) 59

POINT OR CURVE CENTER	N.J. PLANE COORDINATES NORTH	EAST	CURVE DATA CENTRAL ANGLE	RADIUS	LENGTH	TANGENT	EXTERNAL
RAMP TE							
P.C. TE 6+29.29	699,036.639	2,132,401.536					
CTR. CURVE TE-1	698,538.102	2,132,067.679	22°-53'-37.0"Rt.	600'	239.74	121.49	12.18
P.T. TE 8+69.03	698,867.491	2,132,569.179					
P.O.T. TE 9+50.00 Rt.	698,799.817	2,132,613.628					
P.O.T. TE 9+50.00 Lt.	698,816.286	2,132,638.703					
P.C. TE 9+90.05	698,782.808	2,132,660.692					
CTR. CURVE TE-2	698,947.503	2,132,911.442	30°-03'-00.0"Lt.	300'	157.34	80.53	10.62
P.T. TE 11+47.39	698,679.380	2,132,776.868					
P.C.C. @ 75 G&T 138+01 RIGHT	698,965.972	2,132,482.895					
CTR. CURVE TE-3	698,794.709	2,132,361.367	13°-29'-43.8"Rt.	210'	49.46	24.85	1.47
P.C.C. TE 7+86.85	698,932.882	2,132,519.507					
P.O.T. @ 75 G&T 129+29 RIGHT	699,065.797	2,132,420.911					
P.C. TE 7+04.58 LEFT 30.00'	699,013.581	2,132,480.982					
P.C.C. @ 75 G&T 139+41 RIGHT	698,871.237	2,132,610.855					
CTR. NOSE	698,869.654	2,132,609.633		2'			
P.C.C.	698,868.729	2,132,607.860					
CTR. CURVE TE-4	699,146.295	2,133,139.797	5°-44'-29.6"Lt.	600'	60.13	30.09	0.75
P.T. TE 9+49.26 LEFT 30.00'	698,816.906	2,132,638.296					
P.I. CR. 114+29.11 Lt. RIGHT 33.00'	698,777.364	2,132,566.168					
P.C.	698,704.132	2,132,685.651					
CTR. NOSE	698,704.984	2,132,686.174		1'			
P.R.C. TE 10+62.31 RIGHT 30.00'	698,705.711	2,132,686.854					
RAMP TW							
P.C.C. TW. 5+00.00	699,183.635	2,132,347.816					
CTR. CURVE W-1	697,439.453	2,131,297.518	6°-05'-16.6"Rt.	2,036'	216.34	108.27	2.88
P.C.C. TW 7+16.34	699,062.408	2,132,526.872					
CTR. CURVE W-2	695,845.195	2,130,089.901	0°-18'-50.1"Rt.	4,036'	22.11	11.06	0.02
P.C.C. TW 7+38.45	699,049.007	2,132,544.463					
CTR. CURVE TW-1	699,220.471	2,132,675.827	83°-24'-55.5"Lt.	216'	314.47	192.50	73.33
P.I. TW 101+52.92	699,070.312	2,132,831.095					
P.O.T. TW. 101+98.71	699,103.230	2,132,862.930					
P.C.C. TW 101+52.92	699,070.312	2,132,831.095					
CTR. CURVE TW-2	699,105.071	2,132,795.153	42°-37'-45.0"Lt.	50'	37.20	19.51	3.67
P.C.C.	699,103.839	2,132,845.138					
CTR. CURVE TW-3	699,104.208	2,132,830.143	62°-29'-30.0"Lt.	15'	16.36	9.10	2.54
P.T.	699,117.338	2,132,837.397					
P.T. TW 101+52.92 RIGHT 24.00'	699,053,627	2,132,848.347					
P.C.	699,074,112	2,132,868.158					
CTR. CURVE TW-4	699,039.353	2,132,904.100	28°-25'-20.0"Rt.	50'	24.80	12.66	1.58
P.C.C.	699,087.030	2,132,889.035					
CTR. CURVE TW-5	699,082.262	2,132,890.541	46°-27'-25.0"Rt.	5'	4.05	2.15	0.44
P.T.	699,086.638	2,132,892.959					
P.R.C. @ 75 G&T 101+45 LEFT	699,019.277	2,132,602.173					
CTR. CURVE TW-6	699,042.800	2,132,620.791	21°-09'-01.6"Lt.	30'	11.07	5.60	0.52
P.C.C. TW 8+14.78	699,014.144	2,132,611.914					

For @ 75; WBM; and EBM Alignment Data See Alignment Sheets.



SCALE : 1" = 30'

State Of New Jersey
Department Of Transportation
ALIGNMENT
ROUTE 280 SECTIONS 6L & 7E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

14/117

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0730 014 117

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (38) 59	22	117

ORANGE ST.

Const. 176.3 S.Y. Conc. Sidewalk, 4"th. (C.O.#2)

Const. 30.8 S.Y. Conc. Sidewalk, 4"th. (C.O.#2)

"Ramp "B" and Orange St."
Construct: (Extra)
2 Units Reset Inlet Heads, Type "B"

"WB" 639+50/12' Lt. to "WB" 640+50/26' Rt.
Construct:
1 Unit Reset Inlet Heads, Type "A"
3 Units Reset Inlet Heads, Type "B"

"WB" 641+00/Lt. & Rt.
Construct:
2 Units Reset Inlet Heads, Type "B"

"WB" 642+90/Lt. & Rt.
Construct:
2 Units Reset Inlet Heads Type "B"

"℄ 75" 642+00/60' Lt. to "℄ 75" 643+20/60' Rt.
Construct:
3 Units Reset Manhole Heads
4 Units Reset Inlet Heads, Type "B"
4 Units Reset Inlet Heads, Type "D"

"℄" 640+45/80' Rt. to "℄" 642+75/52' Lt.
Construct:
2 Units Reset Manhole Heads
2 Units Reset Inlet Heads, Type "B"
2 Units Reset Inlet Heads, Type "D"

"℄ 75" 643+82/3' Rt. to 644+50/3' Rt.
Construct: (C.O.#2)
2 Units Reset Inlet Heads, Type "D"

RTE. 280 W.B.

RTE. 75 N. TO W.

RTE. 75 E. TO S.

Baseline Rte 75

Bridge Not In Contract

Const. 693 S.Y. Pav't. Type FA-BC-12"th.
693 S.Y. Bit. Stab. Base Crse. 4"th.

Const. 33 S.Y. Pav't. Type FA-BC-12"th.
33 S.Y. Bit. Stab. Base Crse. 4"th.

Const. 667 S.Y. Pav't. Type FA-BC-12"th.
667 S.Y. Bit. Stab. Base Crse. 4"th.

Const. 2029.6 S.Y. Conc. Surf. Pav't. Reinf. 9"th.

Const. 1385.3 S.Y. Conc. Surf. Pav't. Reinf. 9"th.

Const. 1223.1 S.Y. Conc. Surf. Pav't. Reinf. 9"th.

Const. 903.9 S.Y. Conc. Surface Pav't Reinf., 9"th (C.O.#2)

Const. 756.5 S.Y. Conc. Surface Pavement, Reinf., 9"th (C.O.#2)

Const. 25.1 S.Y. Conc. Surface Pav't Reinf., 9"th (C.O.#2)

Const. 107.6 S.Y. Conc. Surface Pav't Reinf., 9"th (C.O.#2)

Const. 69.8 S.Y. Wh. Conc. Island Pav't. 4"th (C.O.#2)

Const. 86.0 L.F. Conc. Sidewalk, 4"th (C.O.#2)

Const. 59.4 S.Y. Conc. Sidewalk, 4"th (C.O.#2)

Const. 72 S.Y. Conc. Sidewalk 4"th (C.O.#2)

Const. 94 L.F. Chain Link Fence, 5' High (Supplementary)

Const. 31.6 L.F. 15"x41" Wh. Conc. Barrier Curb (C.O.#2)

Const. 228.4 L.F. 15"x41" Wh. Conc. Barrier Curb (C.O.#2)

Const. 133.5 L.F. 15"x41" Wh. Conc. Barrier Curb (C.O.#2)

Const. 63.5 L.F. Beam Guard Rail (C.O.#2)

Const. 100.2 L.F. Beam Guard Rail (C.O.#2)

Const. 242.5 L.F. 9"x20" Wh. Conc. Vert. Curb (C.O.#2)

Const. 214.3 L.F. 9"x20" Wh. Conc. Vert. Curb (C.O.#2)

Const. 64 L.F. 9"x20" Wh. Conc. Vert. Curb (C.O.#2)

Const. 41.3 L.F. Wh. Conc. Vert. Curb, 9"x20" (C.O.#2)

Const. 21.3 L.F. 9"x20" Wh. Conc. Vert. Curb (C.O.#2)

Const. 172.9 L.F. 9"x20" Wh. Conc. Vert. Curb (C.O.#2)

Const. 301.5 L.F. 9"x20" Wh. Conc. Vert. Curb (C.O.#2)

Const. 303 L.F. 9"x20" Wh. Conc. Vert. Curb (C.O.#2)

Const. 264 L.F. 9"x20" Wh. Conc. Vert. Curb

Const. 488 L.F. 9"x20" Wh. Conc. Vert. Curb

Const. 478.5 Vert. Curb

Const. 32 L.F. Wood Barricade, Type A

Const. 216.8 L.F. 15"x41" Wh. Conc. Barrier Curb

Const. 59.2 L.F. 15"x41" Wh. Conc. Barrier Curb (C.O.#2)

Const. 168.4 S.Y. Conc. Sidewalk, 4"th.

Const. 149 S.Y. Conc. Sidewalk, 4"th.

Const. 680 S.Y. Pav't. Type FA-BC-12"th.
680 S.Y. Bit. Stab. Base Crse. 4"th.

Const. 263 S.Y. Wh. Conc. Island Pav't. 4"th.

Const. 39 L.F. 5"x41" Wh. Conc. Barrier Curb

Const. 63 S.Y. Conc. Island Pav't. 4"th.

Const. 50 S.Y. Conc. Sidewalk, 4"th.

Const. 94 S.Y. Conc. Island Pav't. 4"th.

Const. 167 S.Y. Conc. Sidewalk, 4"th.

Const. 64 S.Y. Conc. Island Pav't. 4"th.

Const. 50 S.Y. Conc. Sidewalk, 4"th.

Const. 54 S.Y. Conc. Sidewalk, 4"th.

Const. 38 S.Y. Conc. Sidewalk, 4"th.

Const. 10 L.F. 5"x20" Wh. Conc. Vert. Curb

Const. 210 L.F. Beam Guard Rail

Const. 5.9 L.F. 9"x20" Wh. Conc. Vert. Curb

Const. 106 L.F. 9"x20" Wh. Conc. Vert. Curb

Const. 167 S.Y. Conc. Sidewalk, 4"th.

Const. 54 S.Y. Conc. Sidewalk, 4"th.

Const. 167 S.Y. Conc. Sidewalk, 4"th.

Const. 54 S.Y. Conc. Sidewalk, 4"th.

Const. 64

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.		23	117

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ORANGE STREET

3RD. ST.

2ND ST.

1ST. STREET

RAMP A

RAMP B

RAMP C

RAMP D

RAMP TE

RAMP TW

ROUTE 280 W.B.

ROUTE 280 E.B.

ROUTE 75 N. TO W.

ROUTE 75 E. TO S.

COLLECTOR ROAD

END PROJECT
ROUTE 280 E.B. @ STA. 651+00

Control of Access Line

Prop. R.O.W. & Control of Access Line

Existing Wood Barricade

Const. 44 LF Chain Link Fence 5' Hg. (Supplementary)

Const. 1 Unit Relocation of Exist Hydrant Inv. 119.50

Const. 1 Unit - Inlet Type B
60 - 66 L.F. - 12" RCCP

~~Const. 519 SY. Pavemt. Type FA-BC-1, 2" Th.~~
~~519 S.Y. Bitum. Slab Base Course, 4" Th.~~

~~Const. 1015 S.Y. Pavemt. Type FA-BC-1, 2" Th.~~
~~1015 S.Y. Bitum. Slab Base Course, 4" Th.~~

~~Const. 100 Tons Pavemt. Type FA-BC-1~~
~~100 Tons Bitum. Slab Base Course~~

Const. 124 L.F. 9"x Var. Wh. Conc. Vert. Curb, Doweled

Const. 246 L.F. Wood Barricade, Type A

Const. 92 L.F. Wood Barricade, Type A

Const. Bituminous Treated Slag Slope protection
See Cross Sections for Quantities (As Built - 892.75 S.Y.)

Const. 300 L.F. 9"x 20" Wh. Conc. Vert. Curb

Const. 42.1 S.Y. Conc. Sidewalk, 4" Th.

Const. 109.5 S.Y. Conc. Sidewalk, 4" Th.

Const. 420 L.F. 9"x 20" Wh. Conc. Vert. Curb

Const. 32.8 S.Y. Conc. Sidewalk, 4" Th.

Const. 44 L.F. Beam Guard Rail

Const. 2 Unit Terminal Post

Const. 865 L.F. 9"x 20" Wh. Conc. Vert. Curb

Const. 382 L.F. 9"x 20" Wh. Conc. Vert. Curb, Doweled

Const. 933 L.F. 9"x 20" Wh. Conc. Vert. Curb

Const. 266 L.F. 9"x 20" Wh. Conc. Vert. Curb

Const. 140 L.F. 9"x 8" Wh. Conc. Vert. Curb, Doweled

Const. 1 Unit - Inlet, Type B
1 Unit - Inlet Type E, UEH
24 L.F. - 12" RCCP

Const. 19 Tons Pavement Type FA-BC-1
~~19 tons Bitum. Slab Base Course~~

Remove 110 L.F. Guard Rail

Remove 63 L.F. Guard Rail

Remove 210 L.F. Guard Rail

Remove 70 L.F. Fence

Reset Beam Guard Rail With Existing Posts

Exist. Bituminous Surface on Concrete Base

Exist. Bituminous Pavement

Exist. Concrete Pavement

Exist. Bituminous Shoulder

Exist. Viaduct

24"x 48" Brick Sewer

Reset Head

Toe of Slope 1

Toe of Slope 2

Top of Slope 1

Top of Slope 2

P.O.C. TW 5+00.00

P.O.C. TW 7+46.34

P.R.C. TW 7+38.45

P.T. TW 10+52.92

P.C. TE 6+23.22

P.C. TE 8+90.05

P.T. TE 11+47.40

P.O.T. TW 10+92.71

P.O.C. TE 8+90.05

S 83°-03'-38" E

S 33°-17'-30.0" E

S 50°-51'-05" E

S 51°-18'-00" E

S 51°-39'-40" E

S 52°-08'-43" E

N.J. STATE GRID SYSTEM

TO BE CONSTRUCTED	CONTRACT QUANTITIES	AS BUILT QUANTITIES
7 Subbase, Type 1	377 C.Y.	317.2
8 Subbase, Type 5	379 C.Y.	292.8
10 Bituminous-Stabilized Base Course, 4" Th.	~~1,232.3 TON~~ 1,068 S.Y.	see total
10 Bituminous-Stabilized Base Course	131 Tons	see total
12 Pavement Type FA-BC-1, 2" Th.	~~247.1 TON~~ 1,068 S.Y.	see total
12 Pavement Type FA-BC-1	119 Tons	see total
Prime Coat No. 1 Item	~~472 Gal.~~	
99 12" Reinforced Concrete Culvert Pipe	92 L.F.	34
100 Inlets, Type B	2 Unit	2
101 Inlets, Type E, Using Existing Head	1 Unit	1
21 Reset Heads	1 Unit	1
22 9"x 20" White Concrete Vertical Curb	1,496 L.F.	1,317.2
24 9"x 8" White Concrete Vertical Curb, Doweled	140 L.F.	183.4
22 9"x Var. White Concrete Vertical Curb, Doweled	180 L.F.	180
29 Beam Guard Rail	178 L.F.	156
30 Reset Beam Guard Rail With Existing Posts	235 L.F.	240
4A Wood Barricade, Type A	768 L.F.	552
102 Relocation of Existing Hydrant	1 Unit	1
26 Concrete Sidewalk, 4" Th.	108 S.Y.	79.5
104 Terminal Post	3 Unit	4
5A 5-Ft. Chain Link Fence C.O. #5	L.F.	44

FOR GEOMETRY SEE ALIGNMENT PLAN

SCALE: 1" = 30'

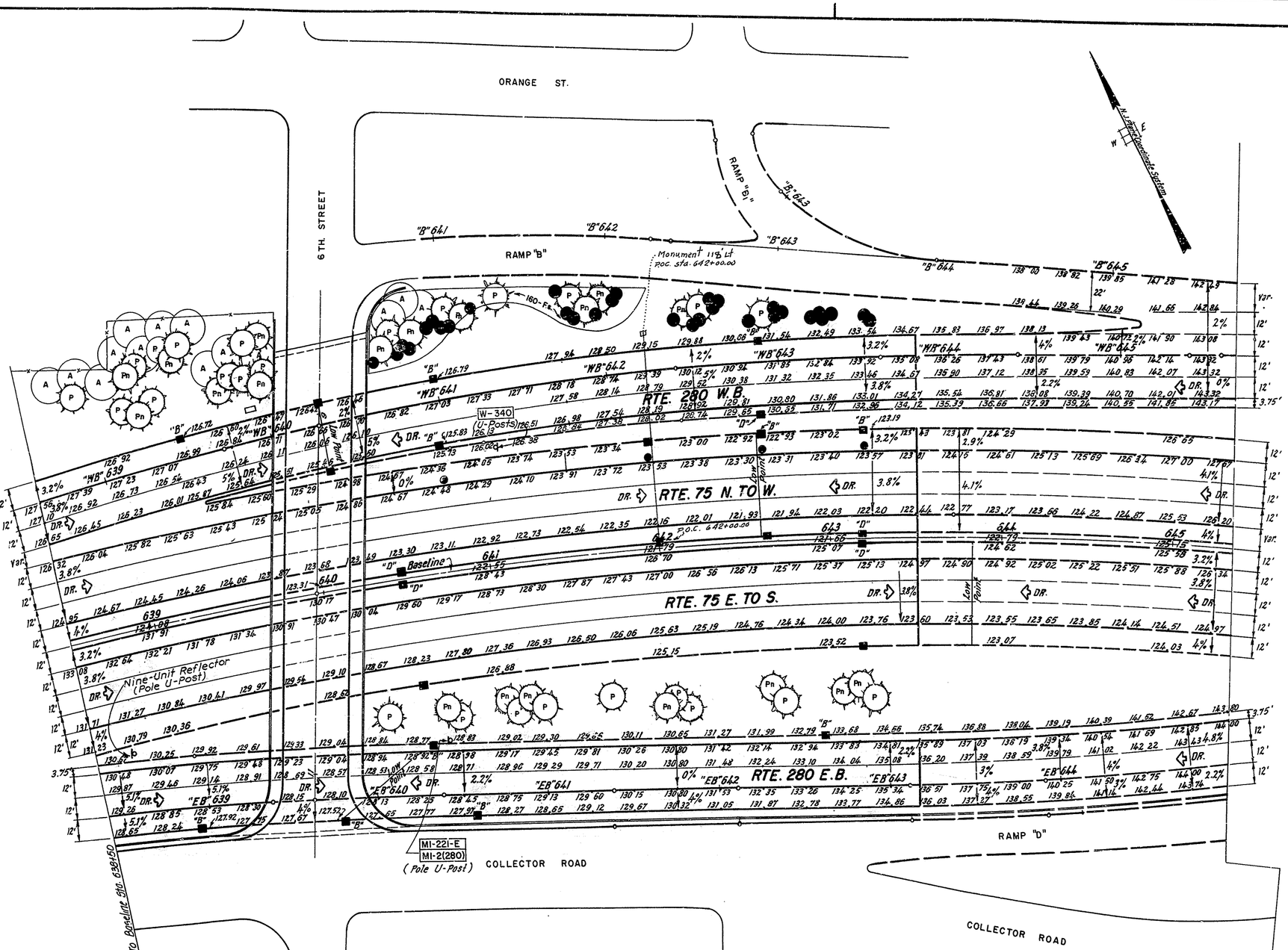
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State Of New Jersey
Department Of Transportation
GENERAL PLANS
ROUTE 280 SECTIONS 6L & 7E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

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Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - 1 - 280 - 6 (38) 59	30	117



TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES	
(33) Sign Size 15"×30"	Unit	1	1	✓
(34) Sign Size 18"×18"	Unit	1	1	✓
(35) Sign Size 48"×48"	Unit	1	1	✓
(39) 36" Interstate Shield	Unit	1	1	✓

			Root	Size Cal.	Size Hgt.	Spacing	Quantity	C.O.# 2 Plan	C.O.# 2 As Built
A (79)	Acer platanoides	Norway Maple	B&B	2'-2½"	12-14'		14 ✓	2	0
P (81)	Pinus nigra	Aus. Pine	B&B		7-8'		25 ✓	1	
Pn (82)	Pinus nigra	Austrian Pine	B&B		4-5'		19 ✓	1	
● (85)	Euonymus alatus	Winged Euonymus	B&B		2-3'		31 ✓		
F.s. (86)	Forsythia intermedia Showy	Showy Border Forsythia	B.R.		18-24"	5'	160 ✓		
(87)	Parthenocissus Tricuspidata, Lowi	Lowis Japanese Creeper	Pot				20 ✓		

SCALE: 1" = 30'

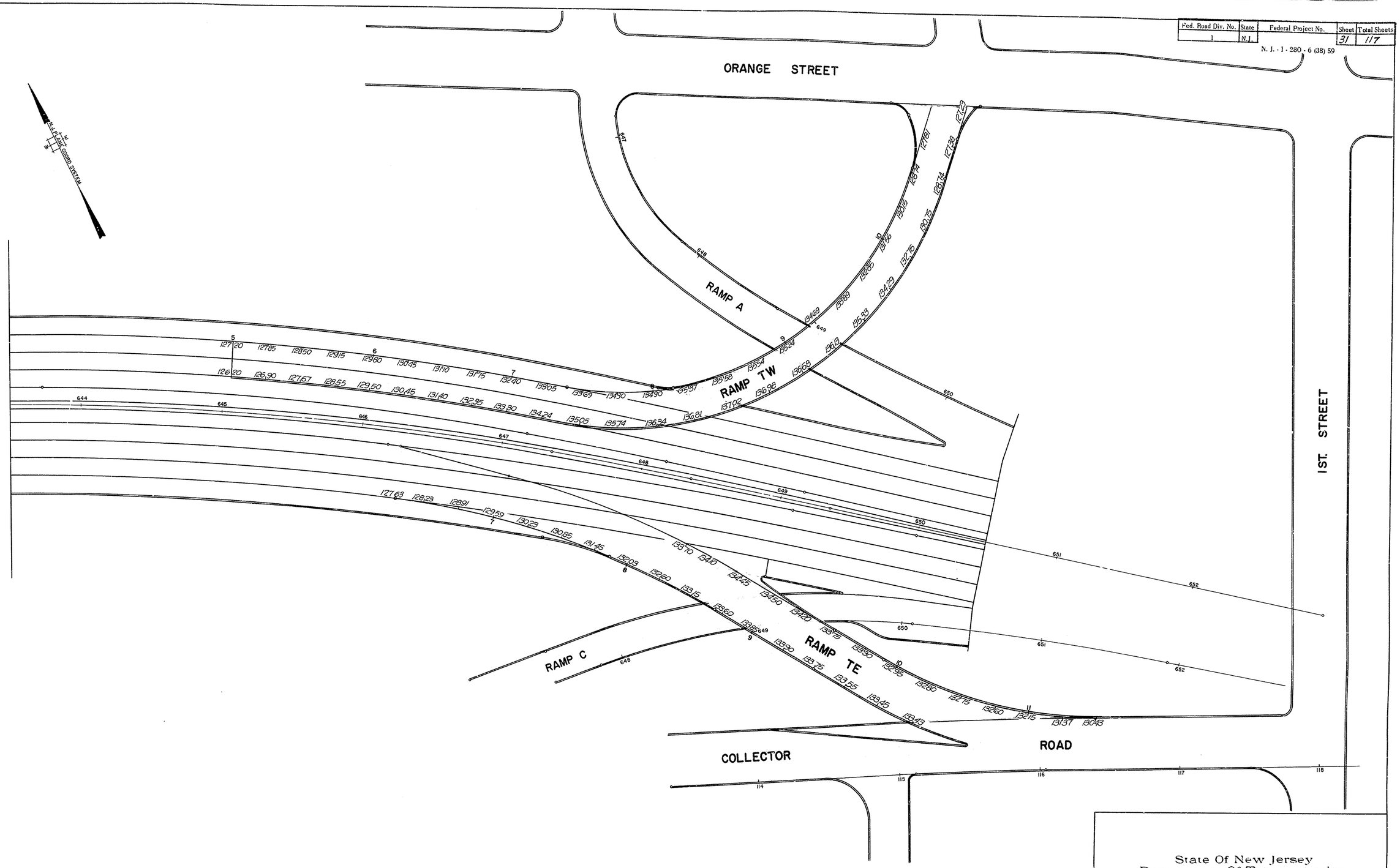
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Made by C.W. Koch Traced by M. Athan Checked by R. Larsen

State Of New Jersey
Department Of Transportation
GRADING, SIGNING & LANDSCAPING PLANS
ROUTE 280 SECTIONS 6 L & 7 E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

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117

0730 030 117

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (38) 59	31	117



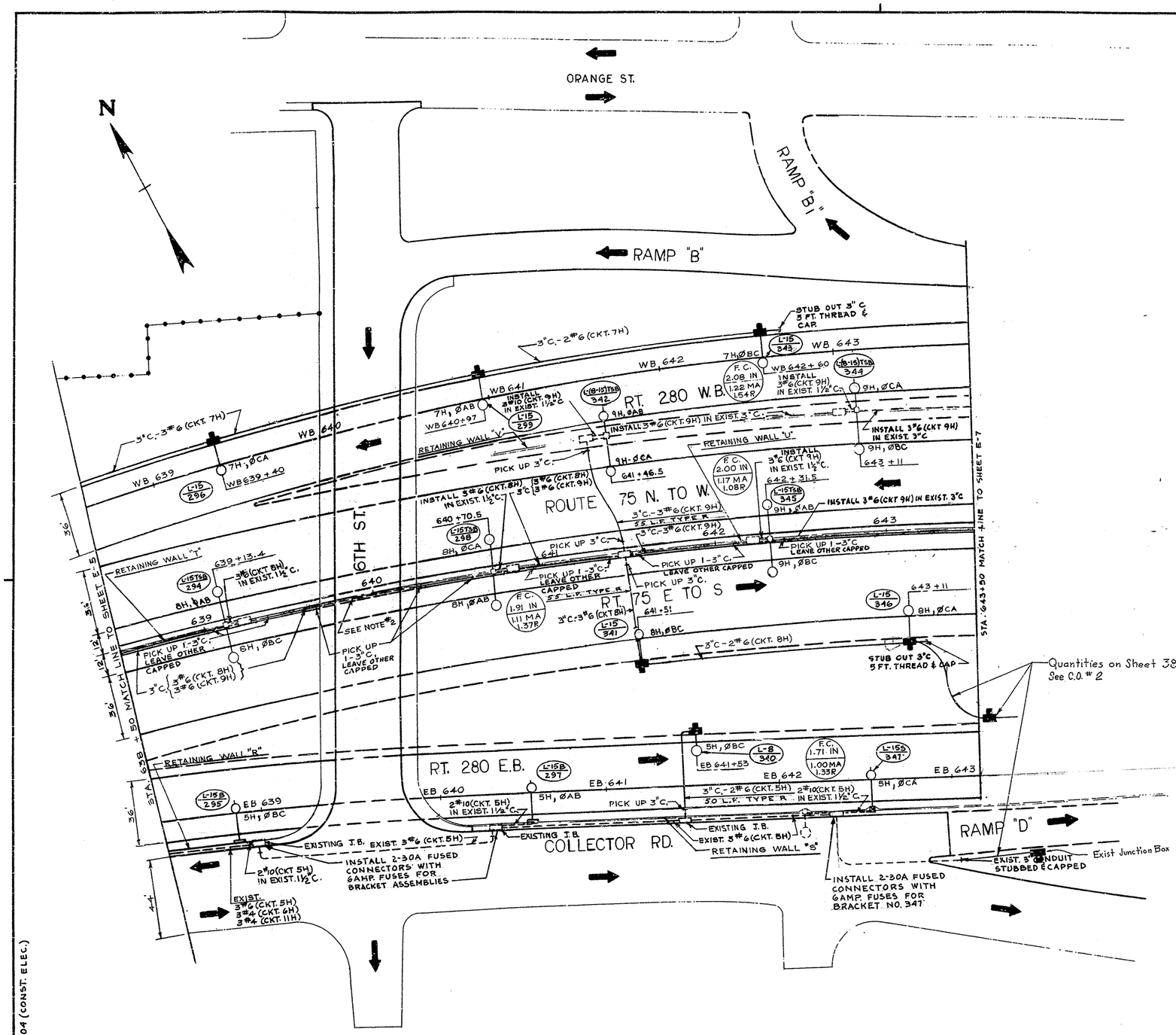
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GRADING, SIGNING & LANDSCAPING PLANS
ROUTE 280 SECTIONS 6L & 7E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

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0730 031 117

FED. ROAD DIV. NO.	FED. AID PROJECT NO	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	NJ-I-280-6(38)69	N. J.		37	117



TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Lighting Standard Assembly Type L-15	Unit	5	5
Lighting Standard Assembly Type L-8	Unit	1	2
Junction Box Foundation Class JBF	Unit	6	6
3" Rigid Metallic Conduit, Type CUG	Lin. Ft.	1090	1084.9
Multiple Lighting Wire No 6 AWG	Lin. Ft.	5600	5658.6
Lighting Bracket Assembly Type L-15B	Unit	2	2
Lighting Standard Assembly Type L-15TSB	Unit	3	3
Lighting Standard Assembly Type L-(8-15)TSB	Unit	2	2
Lighting Bracket Assembly Type L-15S	Unit	1	1
3" RIGID METALLIC CONDUIT, TYPE R	LIN. FT.	180	165

NOTES:

1. FOR SYMBOL LIST. SEE DWG E1
2. CONTRACTOR SHALL PICK UP EXISTING 3" CONDUITS IN COLUMN FOUNDATIONS AND INSTALL 3" CONDUITS BETWEEN THEM AS REQUIRED.
3. FOR DETAIL OF BRACKET ASSEMBLY L-15S SEE DWG. E-8.
4. FOR DETAIL OF BRACKET ASSEMBLY L-15B SEE DWG. E-8.
5. SEE DWG E9 FOR ARRANGEMENT OF BRACKET ARMS ATTACHED TO LTG. STDS. MOUNTED ON TOP OF WALLS.

E6
14

PLAN SCALE: 1"=30'

REVISION	BY	CHK.	DATE

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTIONS 6L & 7E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

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ROUTE 280 SECTION 6L-7E

PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
ENGINEERS - TRENTON, N. J.

0730831-10-04 (CONST. ELEC.)

0730 037 117

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO	TOTAL SHEETS
II	N.J.-I-280-6(38)54	N.J		38	117

STA. 643+50 MATCH LINE TO SHEET E-6

3# G(CKT 9H) IN EXIST. 3"C.

2# G(CKT 9H) IN EXIST. 3"C.

RT. 75 N. TO W.

L-1558 352 — 643+91 — 9H, ⏚ CA

343.2 L.F. 3" Rigid Metallic Conduit Type CUG

SEE DETAIL ON THIS SHEET

18"x36" Junction Box

3# G(CKT 9H) IN EXIST. 3"C.

9H, ⏚ AB — Junction Box Foundation JBF

RT. 75 E. TO S.

63.1 L.F. Rigid Metallic Conduit Type "S"

L-1558 355 — 644+71.5 — 9H, ⏚ BC

2# G(CKT 9H) IN EXIST 3"C

Quantities Include Plan Sheet 37 See C.O. #2

644+70 — L-1558 350

L-157 353 — 645+31.5 — 9H, ⏚ BC

L-1558 356 — 646+31.5 — 9H, ⏚ AB

646+31.5 — L-1558 351 — 9H, ⏚ BC

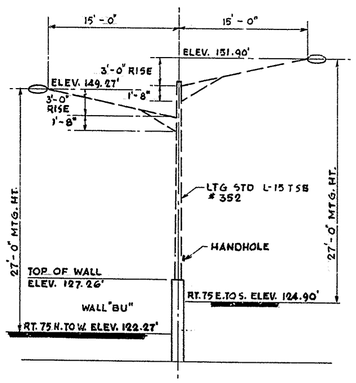
L-157 354 — 647+11.5 — 9H, ⏚ AB

2# G(CKT 9H) IN EXIST. 3"C.

9H, ⏚ BC

647+91.5 — L-19 357 — 9H, ⏚ CA

	TO BE CONSTRUCTED		UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
46	Lighting Standard Assembly Type L-15		Unit	1	1
45	Lighting Standard Assembly Type L-15 TSB		Unit	1	1
47	Lighting Standard Assembly Type L-15 T		Unit	2	2
48	Lighting Standard Assembly Type L-15 SB		Unit	4	4
49	Multiple Lighting Wire № 6 AWG		Lin. Ft.	2850	2,746.4
50	3" Rigid Metallic Conduit Type CUG	CO#2	Lin. Ft.		343.2
51	3" Rigid Metallic Conduit Type R	CO#2	Lin. Ft.		63.1
53 52	Junction Box Foundation Mod. J5F	CO#2	Unit		2
53	18"x36" Junction Box	CO#2	Unit		1



STATION 643+91

NOTE:
1. FOR SYMBOL LIST SEE DWG. E-1

PLAN SCALE: 1" = 30'

E7
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REVISION	BY	CHK	DATE

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTIONS 6L & 7E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

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ROUTE 280 SECTION 6L-7E

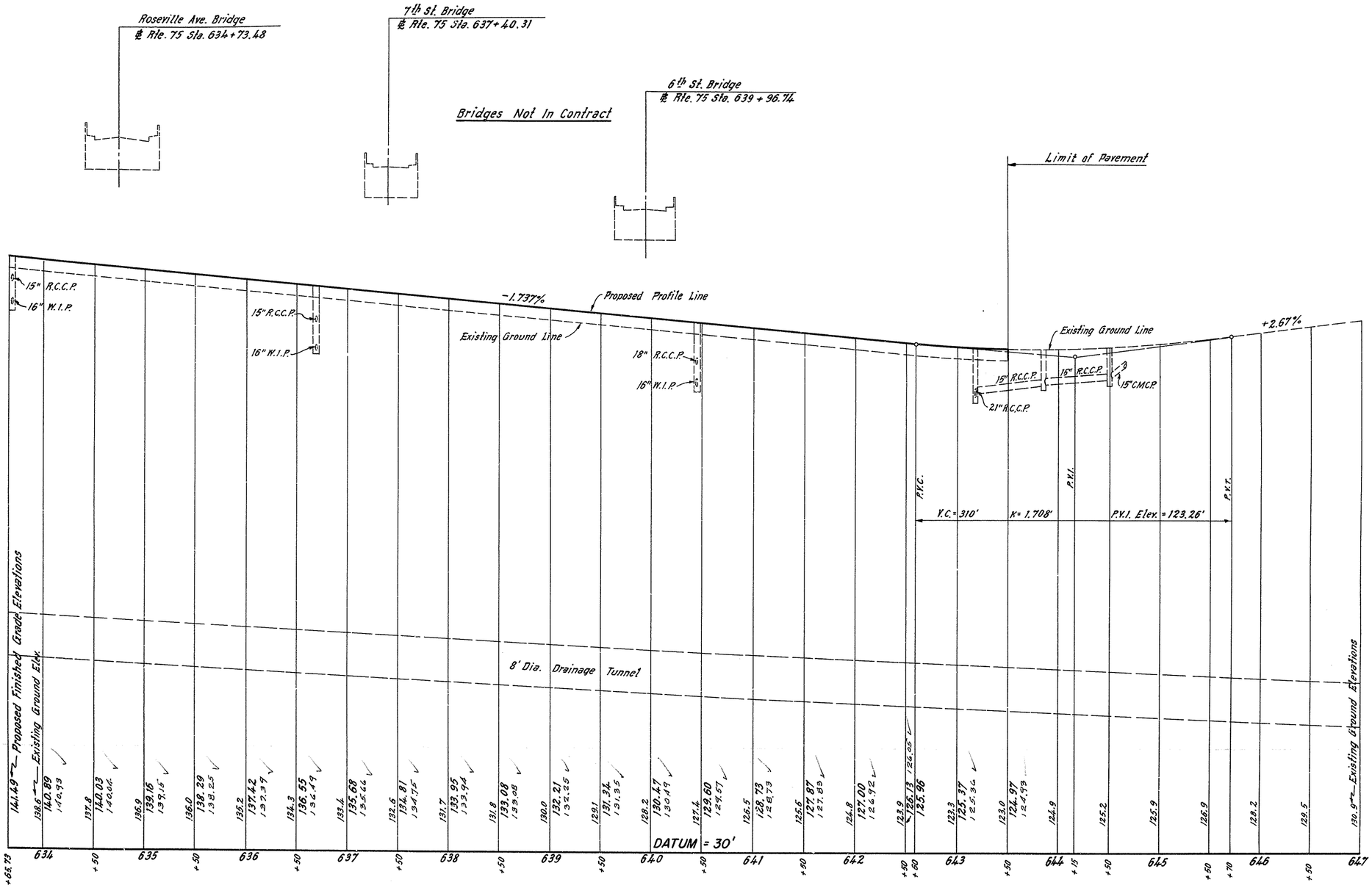
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
ENGINEERS - TRENTON, N. J.

0730631-10-04-(CONST. ELEC.)

0>30 038 117

SCALE: HOR. 1" = 50'
VERT. 1" = 10'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (38) 59	42	117



NOTE:
Dashed lines represent work done By Others.

PROFILE - ROUTE 75 EASTBOUND

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by R. Larsen Traced by M. Athan Checked by J. King

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTIONS 6 L & 7 E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

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0730 042 117

SCALE: HOR. 1"=50'
VERT. 1"=10'

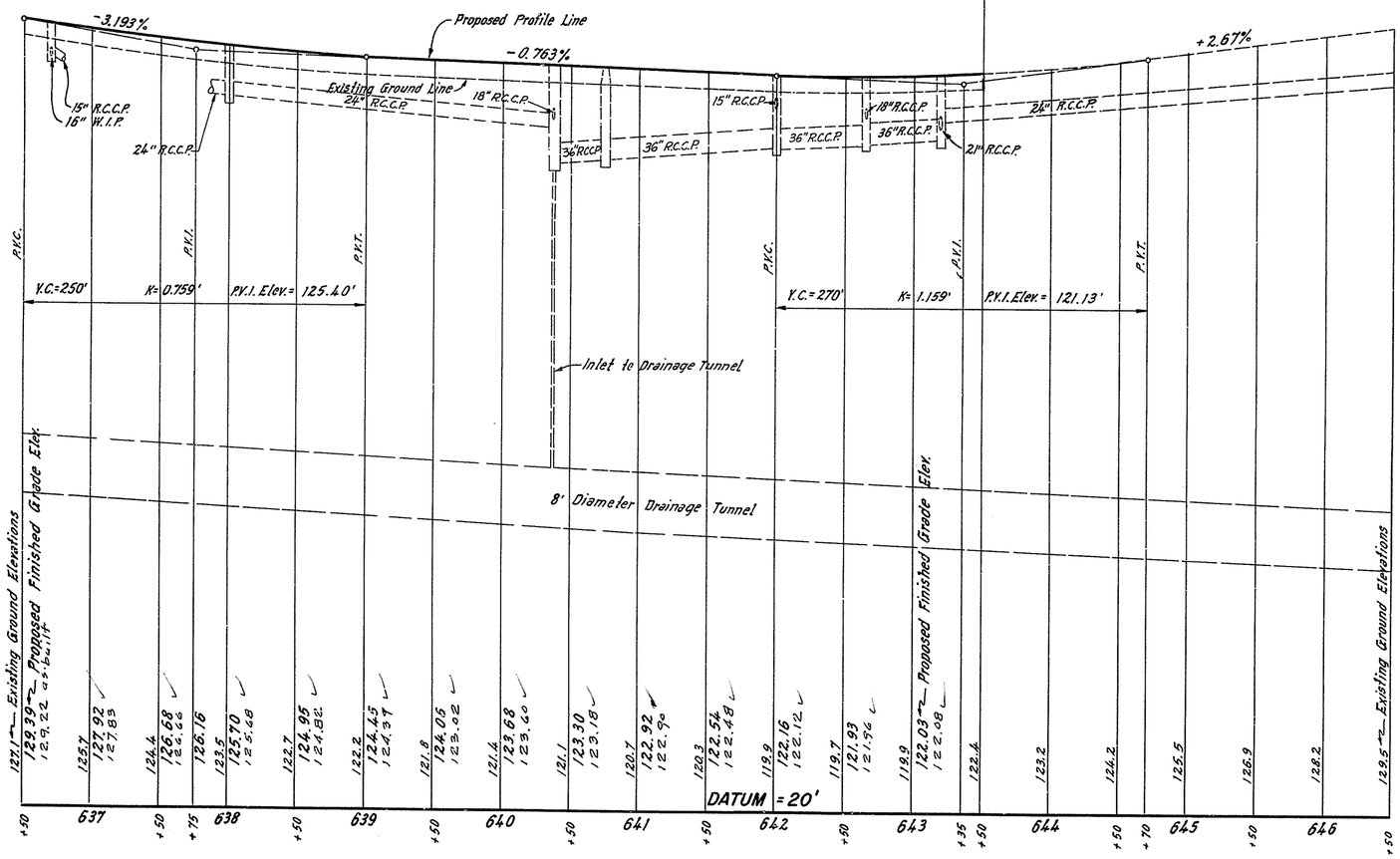
Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (38) 59	44	117

7th St. Bridge
℄ Rte. 75 Sta. 637+40.31

6th St. Bridge
℄ Rte. 75 Sta. 639+96.74

Bridges Not In Contract

Limit of Pavement



PROFILE – ROUTE 75 WESTBOUND

NOTE:
Dashed lines represent work done By Others.

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State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTIONS 6 L & 7 E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

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117

0730 044 117

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - 1 - 280 - 6 (38) 59	45	117

SCALE : HOR. 1" = 50'
VERT. 1" = 10'

℄ Rte. 280 E.B. Sta. 633+65.73 =
℄ Rte. 75 Sta. 633+65.73 / 72' Right

Elevations Controlled by Rte. 75 E.B. Profile
See Grading Plan Sheet # 26

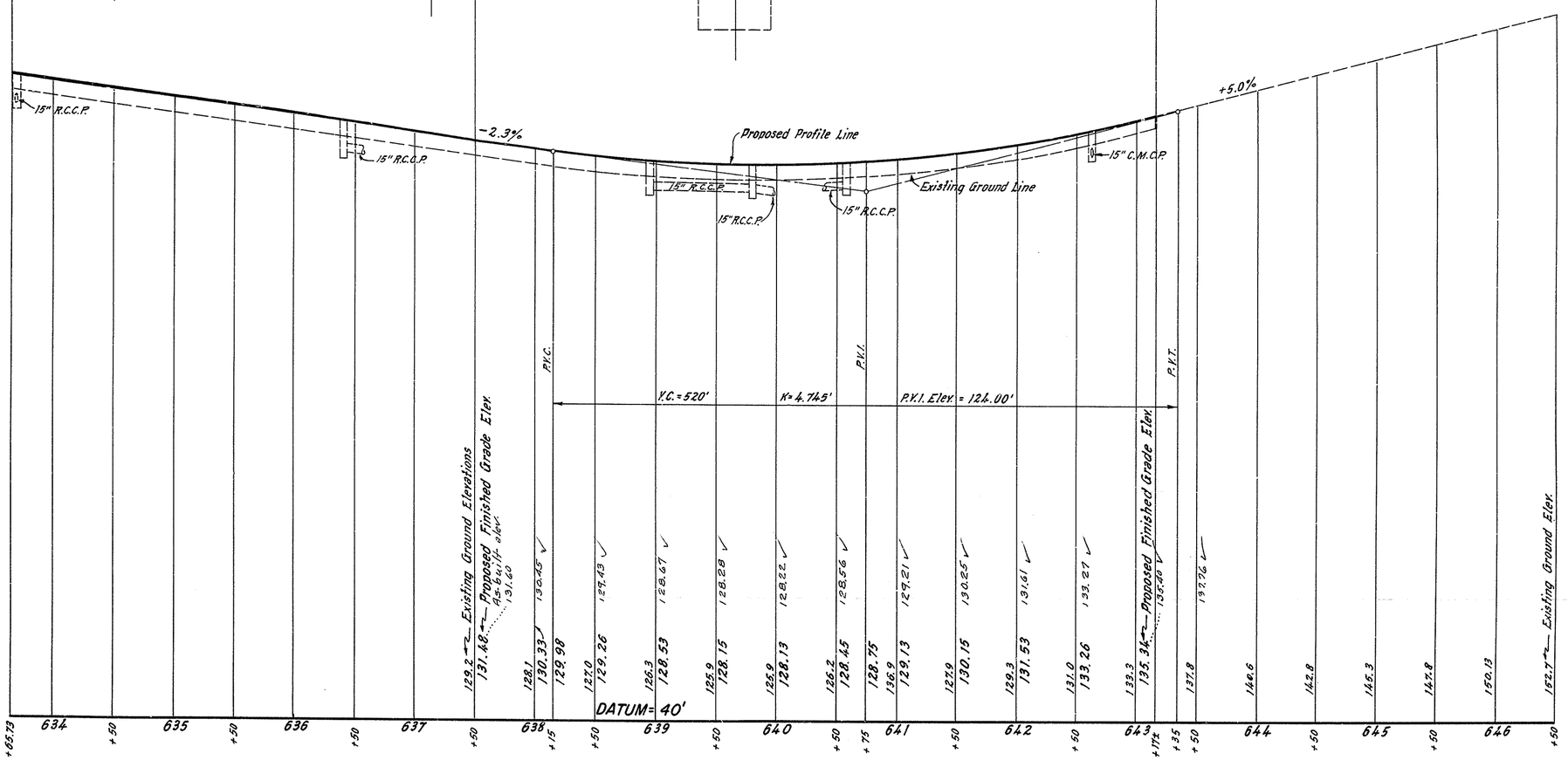
Roseville Ave. Bridge
℄ Rte. 280 E.B. Sta. 634+49.98

7th St. Bridge
℄ Rte. 280 E.B. Sta. 637+13.06

Bridges Not In Contract

6th St. Bridge
℄ Rte. 280 E.B. Sta. 639+62.45

Limit of Pavement



PROFILE – ROUTE 280 EASTBOUND

NOTE:
Dashed lines represent work done By Others.

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by R. Larsen Traced by M. Nihan Checked by J. King

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTIONS 6L & 7E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

45
117

0730 045 117

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (38) 59	46	117

SCALE: HOR. 1"= 50'
VERT. 1"=10'

Elevations Controlled by Rte. 75 W.B. Profile
See Grading Plan Sheet #26

℄ Rte. 280 W.B. Sta. 633+65.73 =
℄ Rte. 75 Sta. 633+65.73 / 72' Left

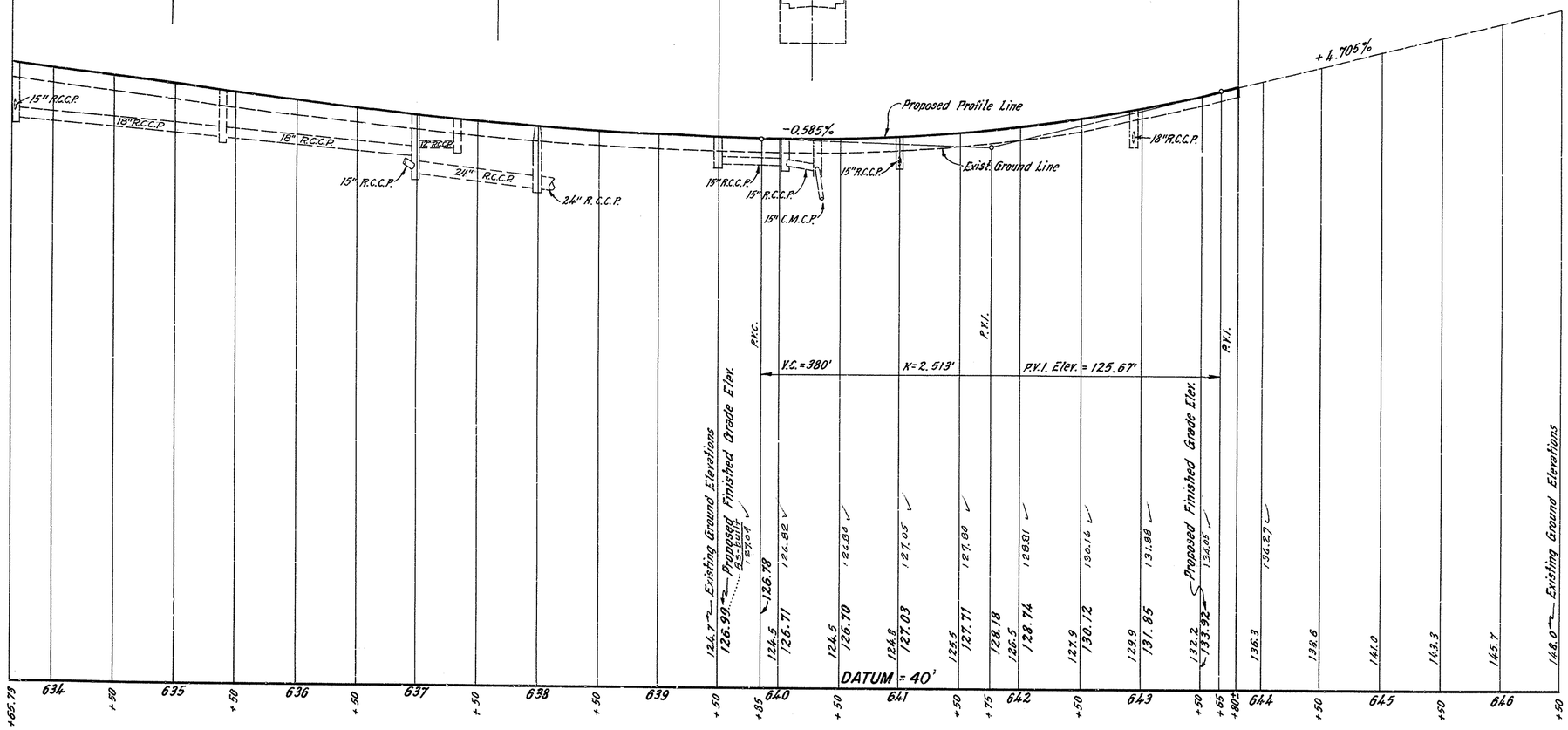
Roseville Ave. Bridge
℄ Rte. 280 W.B. Sta. 634+96.88

Bridges Not In Contract

7th St. Bridge
℄ Rte. 280 W.B. Sta. 637+65.61

6th St. Bridge
℄ Rte. 280 W.B. Sta. 640+27.52

Limit of Pavement



PROFILE – ROUTE 280 WESTBOUND

NOTE:
Dashed lines represent work done By Others.

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by P. Larsen Traced by M. Athan Checked by J. King

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTIONS 6 L & 7 E
From Grove Street to Fourth Street
PAVING, SIGNS, LIGHTING and PLANTING
Scales as Indicated

46
117

0730 046 117

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	1	97

UTILITIES
PUBLIC SERVICE ELECTRIC & GAS CO. - ELECTRIC
PUBLIC SERVICE ELECTRIC & GAS CO. - GAS
BELL ATLANTIC CORP. - TELEPHONE
CABLEVISION OF NEWARK - CABLE TV
CITY OF NEWARK - WATER
CITY OF NEWARK - SANITARY SEWER
CITY OF NEWARK - FIRE ALARM
CITY OF NEWARK - POLICE DEPT. (ABANDONED)

State of New Jersey
Department of Transportation

PLANS OF

ROUTE 280 **SECTION 7AA**

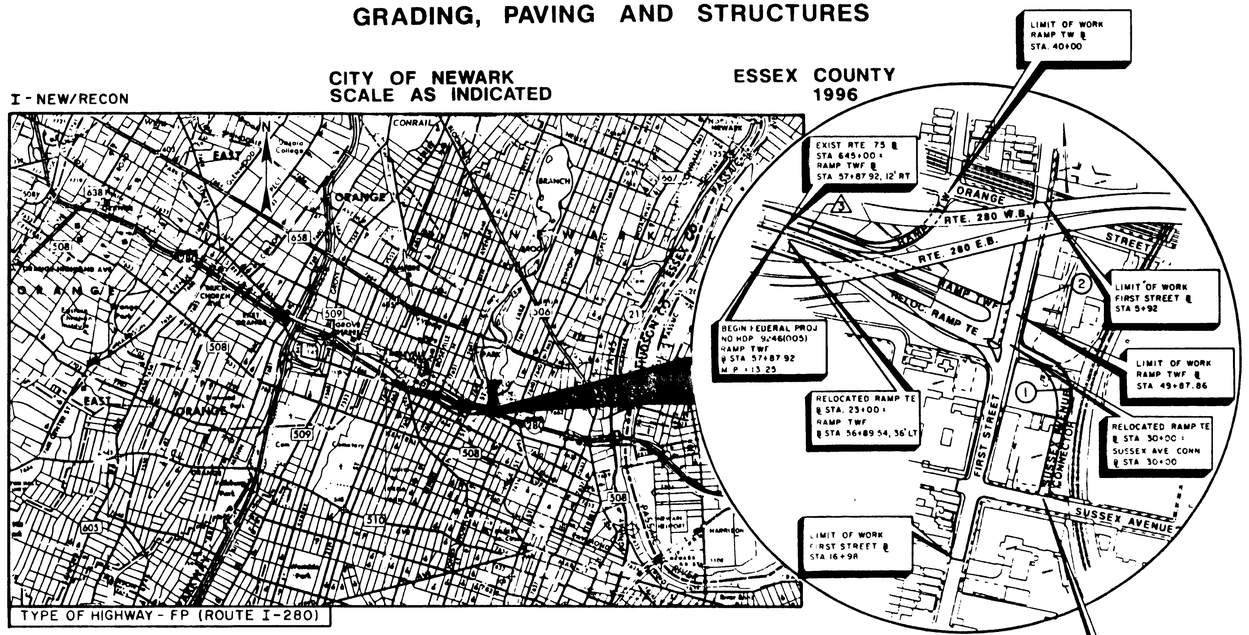
RAMP IMPROVEMENTS AT FIRST STREET

GRADING, PAVING AND STRUCTURES

I - NEW/RECON

CITY OF NEWARK
SCALE AS INDICATED

ESSEX COUNTY
1996



KEY MAP

SCALE IN FEET

2640 1320 2640 5280

WALLS IN THIS CONTRACT	
①	WALL NO. 1 ON SUSSEX AVENUE CONNECTOR
②	WALL NO. 2 ON FIRST STREET

SIGN SUPPORT STRUCTURES IN THIS CONTRACT	
⚠	OVERHEAD SIGN STRUCTURE

DESIGN TRAFFIC DATA - FIRST ST. (BET. RAMP TE AND SUSSEX AVE.)	
ADT (1995) - 2 WAY	24,380
ADT (2015) - 2 WAY	29,760
DHV (2015) - 2 WAY	3,410
D	69.5%
T	3.5%
V	30 M.P.H.

DESIGN TRAFFIC DATA - I-280 RAMP TE	
ADT (1995) - 1 WAY	25,520
ADT (2015) - 1 WAY	31,140
DHV (2015) - 1 WAY	3,280
D	100 %
T	3.5%
V	40 M.P.H.

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	KEY
1A	ESTIMATE-DISTRIBUTION OF QUANTITIES
2 - 5	TYPICAL SECTIONS
6	PLAN SHEET INDEX & BORING PLAN
7	LEGEND
8 - 10	CONSTRUCTION PLANS
11 - 13	DRAINAGE AND SOIL EROSION PLANS
14 - 16	PROFILES
17 - 18	TIES
19 - 21	GRADES
22 - 29	ELECTRICAL PLANS
30 - 33	TRAFFIC STRIPING AND SIGNING PLANS
34	LANDSCAPE PLAN
35 - 37	CONSTRUCTION DETAILS
38	METHOD OF CROSS SECTIONS
39 - 61	CROSS SECTIONS
62 - 81	TRAFFIC CONTROL PLANS
82 - 97	BRIDGE PLANS

STANDARD ROADWAY CONSTRUCTION / TRAFFIC CONTROL / BRIDGE DETAILS BOOKLET DATED SEPT., 1995 AND ELECTRICAL BUREAU STANDARD DETAILS (1995) ARE APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

AS-BUILT PLANS

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THIS PROJECT HAS BEEN CONSTRUCTED IN CONFORMITY WITH THE FINAL APPROVED CONSTRUCTION DRAWINGS, SPECIFICATIONS, INCLUDING PROJECT SPECIFIC SUPPLEMENTAL SPECIFICATIONS, AND MODIFICATIONS, IF ANY, AS DESCRIBED IN THE VARIOUS CONSTRUCTION ORDERS. THESE DRAWING FULLY SHOW ALL FINAL LOCATIONS, DIMENSIONS, CHARACTER, DETAILS, AND QUANTITIES OF WORK AS ACTUALLY CONSTRUCTED.

Paul J. Scagnelli — SCHIAVONE CONSTRUCTION CO.
Chief Engineer — TITLE
9/30/98 — DATE

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THE DESIGN MEETS APPLICABLE NJDOT STANDARDS AND PROJECT SPECIFIC SUPPLEMENTAL SPECIFCATIONS, AND MODIFICATIONS, IF ANY, AS DESCRIBED IN THE VARIOUS CONSTRUCTION ORDERS. THE AS-BUILT DRAWINGS ARE BASED UPON ACTUAL FIELD SURVEYS PERFORMED BY SCHIAVONE CONSTRUCTION CO. AND DRAFTED BY GOODKIND & O'DEA, INC.

GOODKIND & O'DEA, INC. — TITLE — DATE

PREPARED BY GOODKIND & O'DEA, INC.

LOUIS K. ROBBINS, P.E.
P.E.N.J. LIC. NO. 36400
10/8/97 DATE

SUBMITTED BY SCHIAVONE CONSTRUCTION CO.

PAUL J. SCAGNELLI — 10/9/97 DATE

TOTAL LENGTH OF THE PROJECT = 1,350 LIN. FT. OR .256 MILES

TOTAL LENGTH OF FEDERAL PROJECT NO. HDP-9246(005) = 1,350 LIN. FT. OR .256 MILES

1989 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION TO GOVERN

Submitted by — Director Project Management — 3/12/98 Date

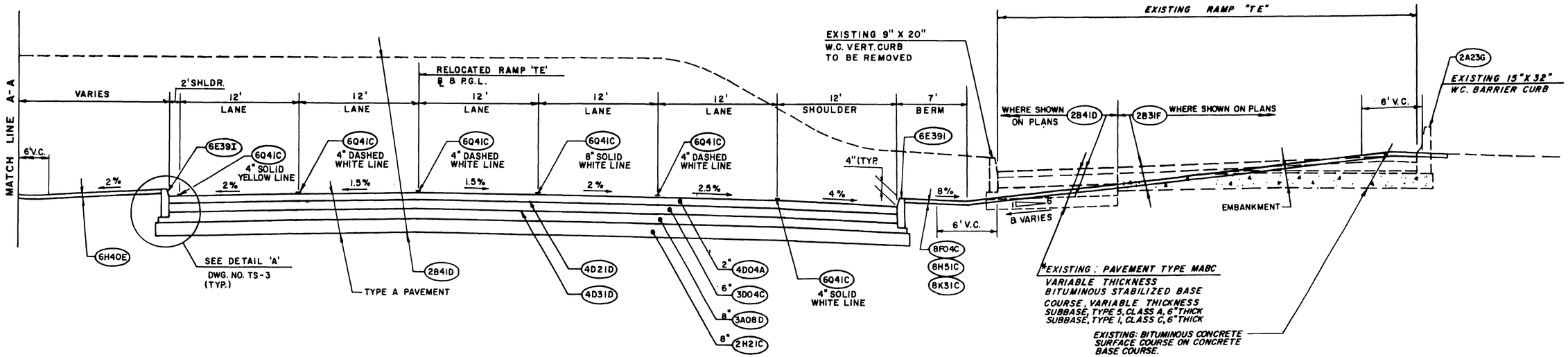
Approved by — Assistant Commissioner, Capital Program Management — 3/12/98 Date

1/97

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

Design of
Designed by
Design Checked by
Detailed by
Detail Checked by

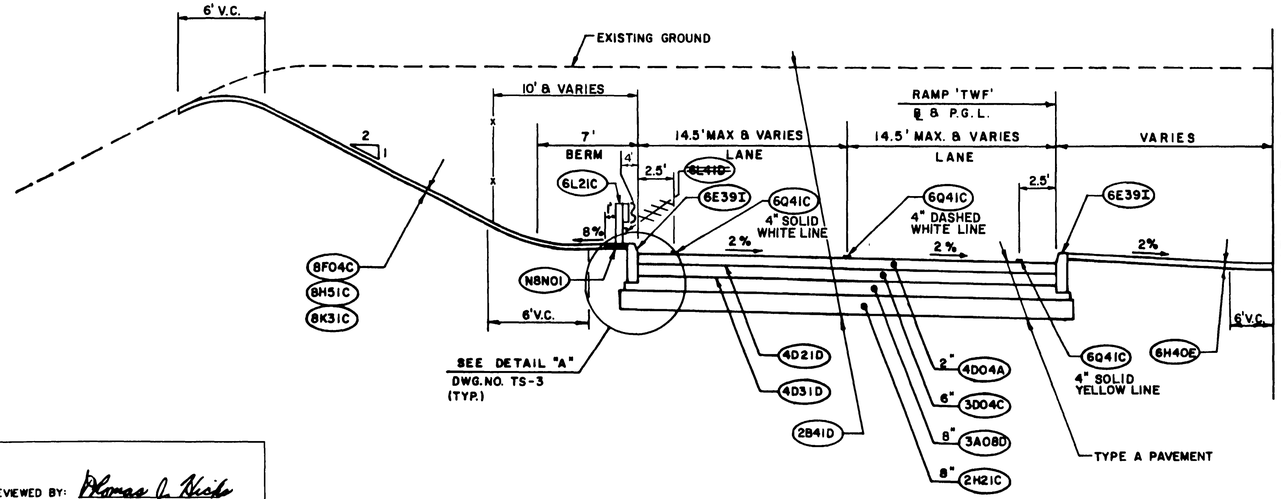
STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9248(005)	2	



RELOCATED RAMP 'TE'
VICINITY OF STA. 28+00
(LOOKING UP STATION)
N.T.S.

DESIGN SPEED = 40 MPH

*A SHORT LENGTH OF THIS EXISTING PAVEMENT SECTION IS CONCRETE AS SHOWN ON THE CONSTRUCTION PLANS AND SHALL BE REMOVED AND PAID FOR UNDER REMOVAL OF CONCRETE BASE COURSE AND CONCRETE SURFACE COURSE.



RAMP 'TWF'
VICINITY OF STA. 52+00
(LOOKING DOWN STATION)
N.T.S.

DESIGN SPEED = 40 MPH

LEGEND OF MATERIALS		
	STD. ITEM NO.	PROPOSED MATERIALS
	2A23G	REMOVAL OF BARRIER CURB
	2B41D	ROADWAY EXCAVATION UNCLASSIFIED
	2B31F	REMOVAL OF CONCRETE BASE COURSE AND CONCRETE SURFACE COURSE
	2H21C	SUBBASE, DESIGNATION I-3
	3A08D	DENSE GRADED AGGREGATE BASE COURSE, 8" THICK
	3D04C	BITUMINOUS - STABILIZED BASE COURSE, MIX I-2
	4D04A	BITUMINOUS CONCRETE SURFACE COURSE, MIX I-4, AGGREGATE MODIFIED
	4D21D	TACK COAT
	4D31D	PRIME COAT
	6E39I	8" X 16" WHITE CONCRETE VERTICAL CURB
	8F04C	TOPSOILING, 4" THICK
	8H51C	FERTILIZING AND SEEDING, TYPE A-3
	8K31C	STRAW MULCHING
	6H40E	WHITE CONCRETE ISLAND, 4" THICK
	6Q41C	TRAFFIC STRIPES, LONG LIFE, EPOXY RESIN
	6L21C	BEAM GUIDE RAIL
	6L41D	RUB RAIL
	N8N01	NON-VEGETATIVE SURFACE, BITUMINOUS CONCRETE

TS-1
TS-4

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Drawn Checked by
Detailed by
Detail Checked by

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Dipento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP. 98

SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

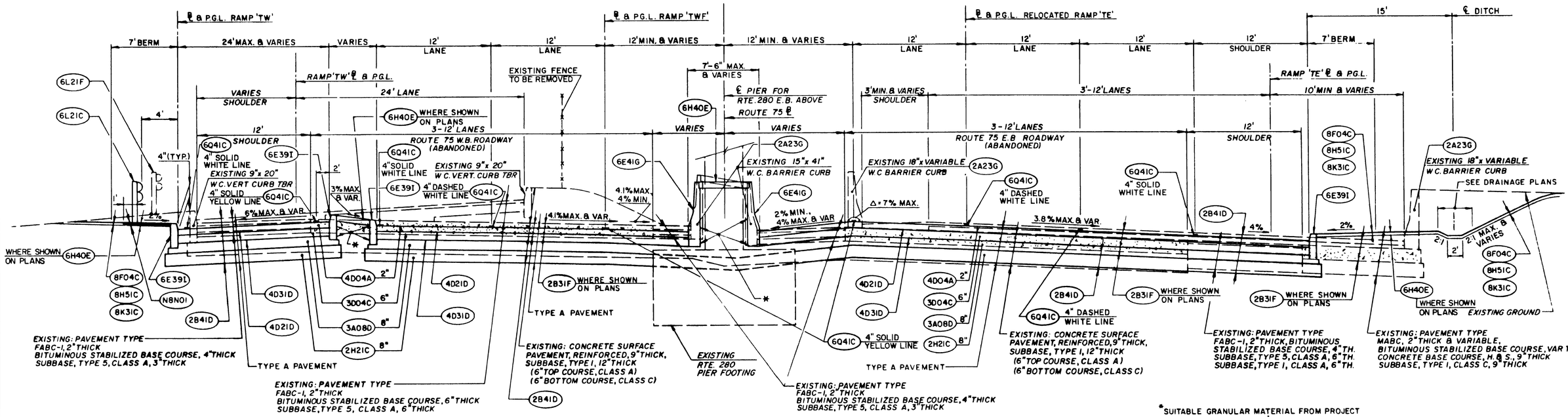
ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis K. Robbins
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: AS SHOWN

2

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	3	



*SUITABLE GRANULAR MATERIAL FROM PROJECT

RELOCATED RAMP 'TE', RAMP 'TW' AND RAMP 'TWF'

VICINITY OF RELOCATED RAMP 'TE' STA. 25+00
N.T.S.

(LOOKING UP STATION - RELOCATED RAMP 'TE' & RAMP 'TW')
(LOOKING DOWN STATION RAMP 'TWF')

LEGEND OF MATERIALS		
	STD. ITEM NO.	PROPOSED MATERIALS
	2A23G	REMOVAL OF BARRIER CURB
	2B41D	ROADWAY EXCAVATION, UNCLASSIFIED
	2B31F	REMOVAL OF CONCRETE BASE COURSE AND CONCRETE SURFACE COURSE
	2H21C	SUBBASE, DESIGNATION I-3
	3A08D	DENSE GRADED AGGREGATE BASE COURSE, 8" THICK
	3D04C	BITUMINOUS - STABILIZED BASE COURSE, MIX I-2
	4D04A	BITUMINOUS CONCRETE SURFACE COURSE, MIX I-4, AGGREGATE MODIFIED
	4D21D	TACK COAT
	4D31D	PRIME COAT
	6E41G	15" X 41" WHITE CONCRETE BARRIER CURB
	6E39I	9" X 18" WHITE CONCRETE VERTICAL CURB
	6H40E	WHITE CONCRETE ISLAND, 4" THICK
	6L21C	BEAM GUIDE RAIL
	6L21F	REMOVAL OF GUIDE RAIL
	8F04C	TOPSOILING, 4" THICK
	8H51C	FERTILIZING AND SEEDING, TYPE A-3
	8K31C	STRAW MULCHING
	N8N01	NON-VEGATATIVE SURFACE, BITUMINOUS CONCRETE
	6Q41C	TRAFFIC STRIPES, LONG LIFE, EPOXY RESIN

TS-2

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Dipento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP. 98

SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

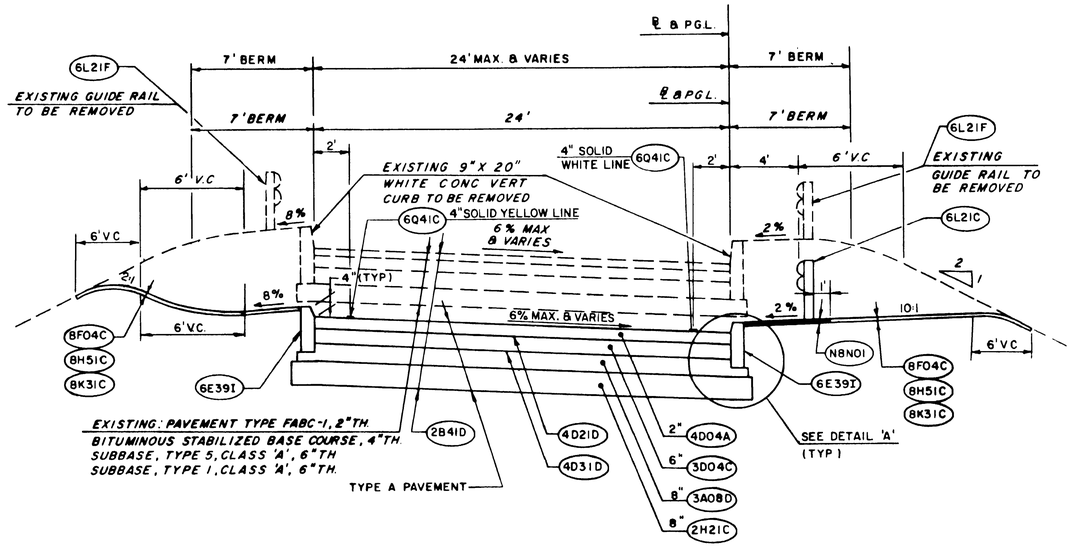
ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis K. Robbins
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: AS SHOWN

3

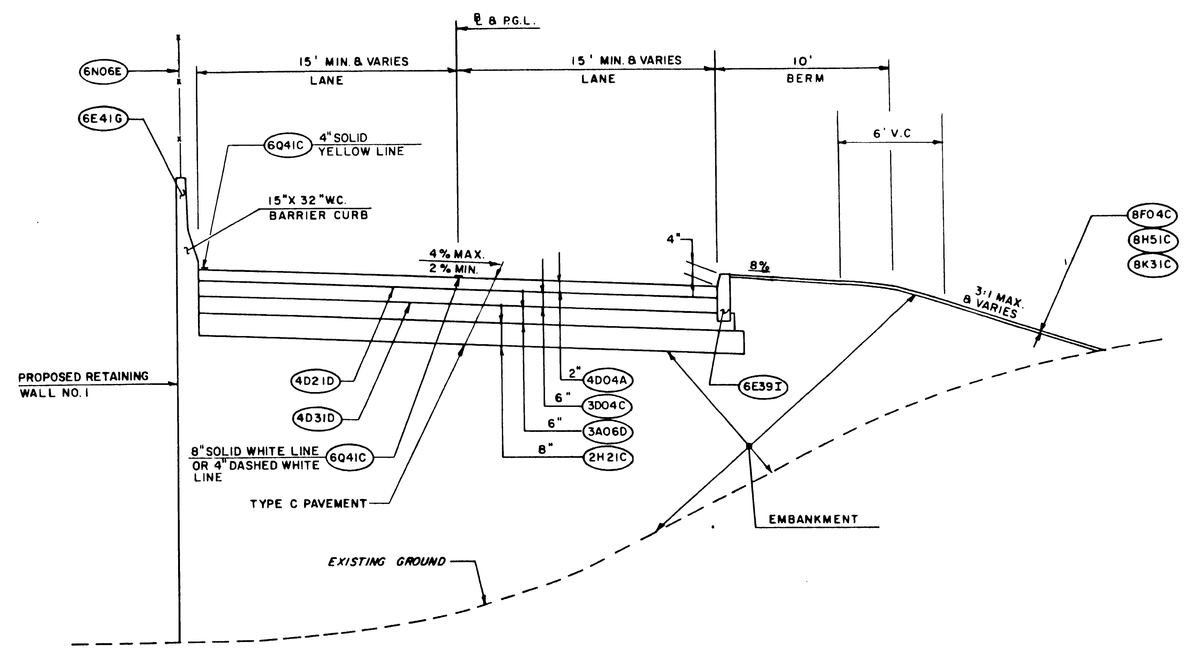
STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	4	



RAMP T W

N.T S

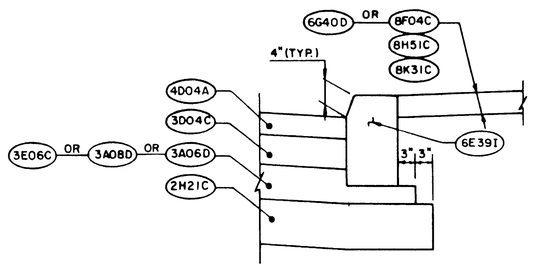
DESIGN SPEED = 25 MPH



SUSSEX AVENUE CONNECTOR

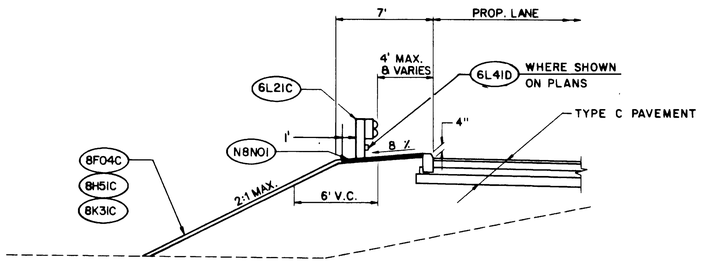
N T S

DESIGN SPEED = 20 MPH



DETAIL "A"

N T S



BERM SECTION WITH BEAM GUIDE RAIL

SUSSEX AVE. CONNECTOR

STA. 33+70 TO STA. 35+25

N.T.S.

LEGEND OF MATERIALS		
	STD. ITEM NO.	PROPOSED MATERIALS
	2B41D	ROADWAY EXCAVATION UNCLASSIFIED
	2H21C	SUBBASE, DESIGNATION I-3
	3A06D	DENSE GRADED AGGREGATE BASE COURSE, 6" THICK
	3A08D	DENSE GRADED AGGREGATE BASE COURSE, 8" THICK
	3D04C	BITUMINOUS - STABILIZED BASE COURSE, MIX I-2
	4D04A	BITUMINOUS CONCRETE SURFACE COURSE, MIX I-4, AGGREGATE MODIFIED
	4D21D	TACK COAT
	4D31D	PRIME COAT
	6E41G	15" X 41" WHITE CONCRETE BARRIER CURB
	6E39I	9" X 16" WHITE CONCRETE VERTICAL CURB
	6L21C	BEAM GUIDE RAIL
	6L21F	REMOVAL OF GUIDE RAIL
	6N06E	CHAIN-LINK FENCE, PVC-COATED STEEL, 6' HIGH
	8F04C	TOPSOILING, 4" THICK
	6G40D	CONCRETE SIDEWALK, 4" THICK
	8H51C	FERTILIZING AND SEEDING, TYPE A-3
	8K31C	STRAW MULCHING
	N8N01	NON-VEGETATIVE SURFACE, BITUMINOUS CONCRETE
	6Q41C	TRAFFIC STRIPES, LONG LIFE, EPOXY RESIN
	3E06C	CONCRETE BASE COURSE, 6" THICK
	6L41D	RUB RAIL

TS-3

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.

LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: AS SHOWN

4

SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

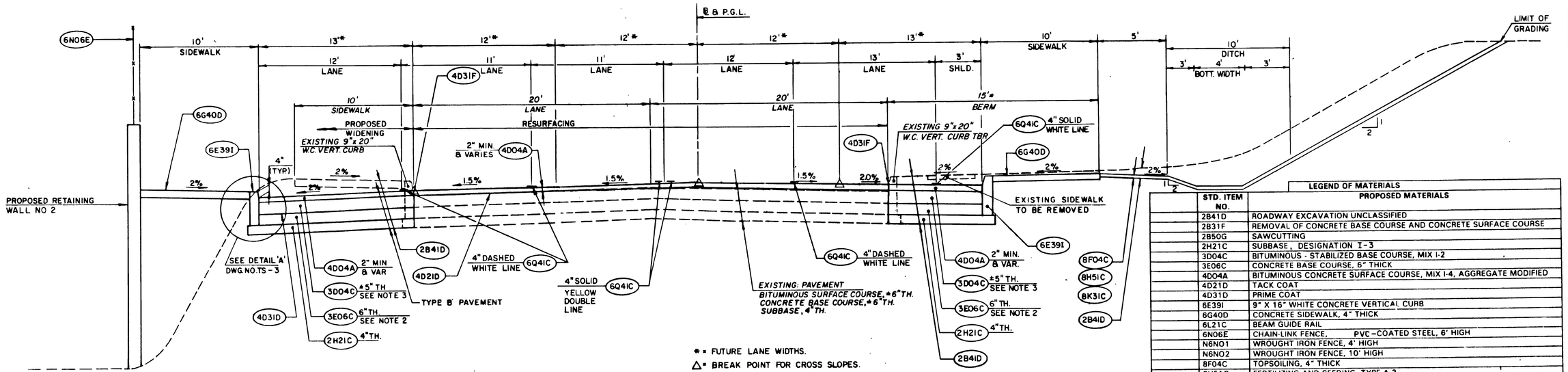
ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	5	

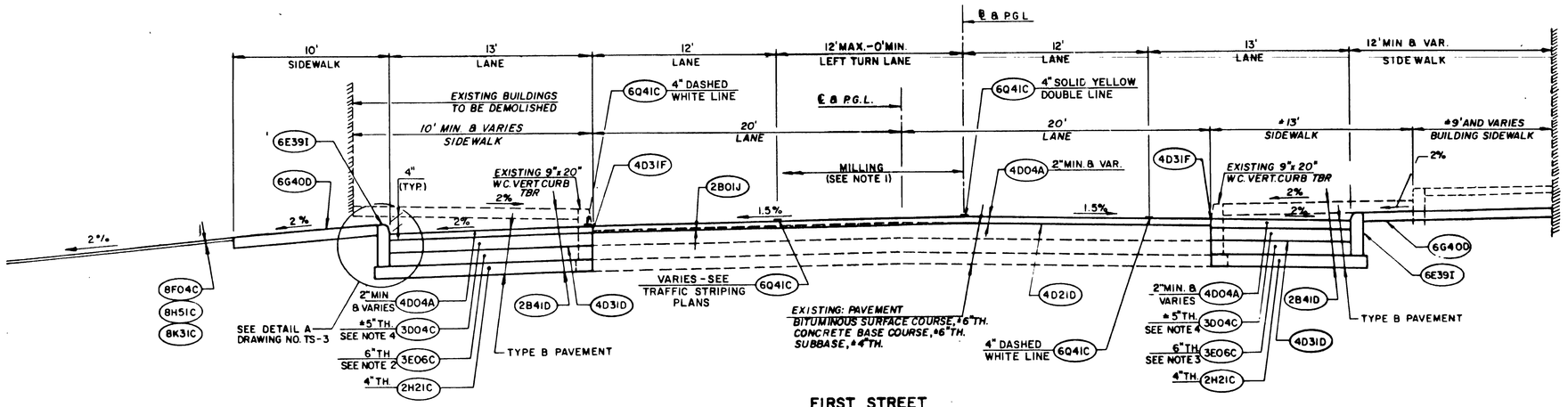


* = FUTURE LANE WIDTHS.
△ = BREAK POINT FOR CROSS SLOPES.

FIRST STREET
NORTH OF RAMP INTERSECTION
N.T.S.

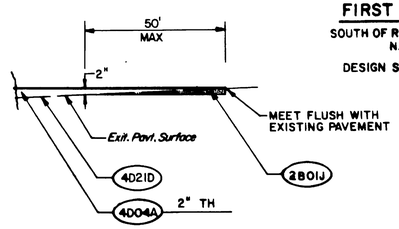
DESIGN SPEED = 30 MPH

	LEGEND OF MATERIALS	
	STD. ITEM NO.	PROPOSED MATERIALS
	2B41D	ROADWAY EXCAVATION UNCLASSIFIED
	2B31F	REMOVAL OF CONCRETE BASE COURSE AND CONCRETE SURFACE COURSE
	2B50G	SAWCUTTING
	2H21C	SUBBASE, DESIGNATION I-3
	3D04C	BITUMINOUS - STABILIZED BASE COURSE, MIX I-2
	3E06C	CONCRETE BASE COURSE, 6" THICK
	4D04A	BITUMINOUS CONCRETE SURFACE COURSE, MIX I-4, AGGREGATE MODIFIED
	4D21D	TACK COAT
	4D31D	PRIME COAT
	6E39I	9" X 16" WHITE CONCRETE VERTICAL CURB
	6G40D	CONCRETE SIDEWALK, 4" THICK
	6L21C	BEAM GUIDE RAIL
	6N06E	CHAIN-LINK FENCE, PVC-COATED STEEL, 6' HIGH
	N6N01	WROUGHT IRON FENCE, 4' HIGH
	N6N02	WROUGHT IRON FENCE, 10' HIGH
	8F04C	TOPSOILING, 4" THICK
	8H51C	FERTILIZING AND SEEDING, TYPE A-3
	8K31C	STRAW MULCHING
	2B01J	MILLING, VARIABLE DEPTH
	4D31F	SAWING AND SEALING JOINTS IN BITUMINOUS CONCRETE OVERLAY
	6Q41C	TRAFFIC STRIPES, LONG LIFE, EPOXY RESIN
	8K21C	WOOD MULCHING
	8M89Z	TOPSOIL



FIRST STREET
SOUTH OF RAMP INTERSECTION
N.T.S.

DESIGN SPEED = 30 MPH



PAVEMENT TRANSITION DETAIL
NOT TO SCALE

NOTES:

1. DEPTH OF MILLING VARIES TO ACHIEVE THE 2" MIN. THICKNESS OF SURFACE COURSE.
2. TOP OF PROPOSED CONCRETE BASE COURSE TO MATCH TOP OF EXISTING CONCRETE BASE COURSE.
3. MATCH EXISTING BITUMINOUS CONCRETE OVERLAY THICKNESS.
4. MATCH EXISTING BITUMINOUS CONCRETE OVERLAY THICKNESS MINUS THE DEPTH OF MILLING REQUIRED FOR THE 1 1/2" MINIMUM THICKNESS SURFACE COURSE IF NECESSARY.
5. THE PROPOSED THROUGH LANES ON FIRST STREET WILL TAPER DOWN TO MEET THE EXISTING LANE WIDTHS OF +/- 10'.

TS-4 / TS-4

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of ____
Designed by ____
Design Checked by ____
Detailed by ____
Detail Checked by ____

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
FIRST ST	LOU			DEC. 97

SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: AS SHOWN

5

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	8	

SCALE IN FEET 30' 15 0 30' 60'

N.J. PLANE COORDINATE SYSTEM

D-1 PARCEL 212 | D-2 PARCEL 213 | D-3 PARCEL 214 | D-4 PARCEL 215

TOPSOIL FERTILIZING AND SEEDING

CONSTRUCT TYPE 'B' PAVEMENT

CONSTRUCT CHAIN LINK FENCE, 4' HIGH - W/GATE

CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB

CONSTRUCT WHITE CONCRETE SIDEWALK, 8' WIDE

10' CURB TRANSITION

PROPOSED R.O.W. LINE

SEE NOTE 1

10' CURB TRANSITION

PROPOSED R.O.W. LINE

AVENUE

CONCRETE SIDEWALK, 10' WIDE

RELOCATE HYDRANT

MEET EXISTING PAVEMENT, CURB AND SIDEWALK (SUSSEX AVE. ℄ STA. 19+40)

10' CURB TRANSITION

CONCRETE SIDEWALK

CONSTRUCT TYPE 'B' PAVEMENT

CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB

CONSTRUCT 9" x 18" CONCRETE VERTICAL CURB AND CONCRETE SIDEWALK

CONSTRUCT CONCRETE SIDEWALK - VARIES

4 Sty. Brick Building

PROPOSED R.O.W. LINE

Existing Line

RELOCATE HYDRANT

FIRST ST. ℄ & PGL

Asphalt Overlay

POLES BY PSE&G

EXISTING ℄ S27° 51'34.7"W 30' x 42' Brick

S25° 57'01. 7"W 30' x 42' Brick

Asphalt Overlay

S27° 51'34. 7"W

POLE BY PSE&G

FIRST STREET

MATCH LINE FIRST STREET ℄ STA. 13+00 SHEET C-2

AP FIRST ST. ℄ STA. 16+98.28 MEET EXISTING PAVEMENT CURB, AND SIDEWALK

10' CURB TRANSITION

B.M. T-2

AP FIRST ST. ℄ STA. 15+48.19

POLE BY PSE&G

CONSTRUCT CONCRETE SIDEWALK 5'-WIDE

MILLING AND RESURFACING

TOPSOIL, FERTILIZING AND SEEDING

POLE BY PSE&G

CONSTRUCT CONCRETE SIDEWALK 5'-WIDE MEET EXISTING SIDEWALK

10' CURB TRANSITION

5 Sty. Brick Factory

CONCRETE SIDEWALK

CONSTRUCT TOPSOIL FERTILIZING AND SEEDING

CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB

CONSTRUCT TYPE 'B' PAVEMENT

2½ Sty. Brick Building

CONSTRUCT SCORED CONC. SIDEWALK - 10' WIDE

FIRST STREET ℄ STA. 14+28.19- SUSSEX AVE. ℄ STA. 20+00.00

NO ACCESS

NO ACCESS

D-5 PARCEL 217

INFILTRATION AREA

CONSTRUCT CHAIN LINK FENCE, PVC COATED STEEL, 8' HIGH, SEE NOTE 2

SUSSEX AVE. CONECTOR ℄ & PGL

LIMIT OF WORK FIRST STREET ℄ STA. 16+98.28

MEET EXISTING CURB (SUSSEX AVE. ℄ STA. 20+60, 40' RT.)

MILL 2" AND RESURFACE WITH BITUMINOUS CONCRETE SURFACE COURSE, MIX I-4 AGGREGATE MODIFIED

CONSTRUCT CONCRETE SIDEWALK, 5'-WIDE

SUSSEX AVE. ℄ & PGL

SUSSEX AVE. CONN. ℄ STA. 34+78, 60' RT.

10' WIDE GATE

SUSSEX AVE. CONN. ℄ STA. 34+78, 35' RT.

CONSTRUCT TYPE 'C' PAVEMENT

Paved Parking

NO ACCESS

SUSSEX AVE. CONNECTOR

SUSSEX AVE. CONNECTOR ℄ STA. 34+20 SHEET C-2

SUSSEX AVE. ℄ STA. 22+05.05- SUSSEX AVE. CONNECTOR ℄ STA. - 35+47.74

CONCRETE SIDEWALK

INSTALL 8" CURB HEAD PIECE

MEET EXISTING PAVEMENT, CURB AND SIDEWALK SUSSEX AVE. ℄ STA. 22+60

10' CURB TRANSITION

CONSTRUCT CONCRETE SIDEWALK, 5'-WIDE

Paved Parking

Debris

Gate

Paved Parking

CONSTRUCT BEAM GUIDE RAIL WITH BEAM GUIDE RAIL ANCHORAGE

NON VEGETATIVE SURFACE BITUMINOUS CONCRETE

CONSTRUCT CHAIN LINK FENCE, PVC-COATED STEEL, 6' HIGH

CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB

MEET EXIST. CHAIN LINK FENCE

END FEDERAL PROJECT NO. HDP-9246(005) SUSSEX AVE. CONN. ℄ STA. 35+47.74

NOTES:

1. PARCEL 212 SHALL BE DEMOLISHED FIRST FOLLOWED BY PARCEL 213, 214 AND FINALLY PARCEL 215. ALL DEMOLITION SHALL BE PERFORMED FROM THE SIDES OF THE BUILDINGS. THE CONTRACTOR WILL AVOID THE BACK YARDS OF THE PROPERTIES IN ORDER TO PROTECT HISTORIC CULTURAL RESOURCES. REMAINING FOUNDATION WALLS WILL BE REMOVED TO THE EXISTING GROUND LINE AND THE BASEMENTS BACK FILLED.

2. EXISTING PAVEMENT INSIDE FENCE SHALL BE REMOVED.

B.M. T-2 ELEV. = 129.288, PK NAIL IN THE ASPHALT BERM ON THE EASTERLY SIDE OF FIRST STREET; 44' LEFT OF FIRST STREET BASELINE STATION 15+77.50.

C-1 / C-3

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN

ROUTE 280 SECTION 7AA

REVIEWED BY: Thomas J. Nicks
THOMAS J. NICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

GOODKIND & O'DEA, INC.
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

8

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP 98

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	9	

30' 15 0 30' 60'
SCALE IN FEET

MATCH LINE RELOC. RAMP-TE @ STA. 28+00 SHEET C-3

REMOVE EXISTING RAMP-TE BITUMINOUS PAVEMENT
CONSTRUCT TOPSOIL, SEEDING AND MULCHING.
REMOVE EXISTING FENCE
MEET EXISTING FENCE
CONSTRUCT CHAIN LINK FENCE, PVC COATED STEEL, 10' HIGH
REMOVE EXISTING RAMP-TE CONCRETE PAVEMENT
CONSTRUCT TOPSOIL, SEEDING AND MULCHING.
BEGIN WROUGHT IRON FENCE, 10' HIGH
RELOC. RAMP TE @ STA. 28+30.4, 117' RT.
ANGLE POINT WROUGHT IRON FENCE 10' HIGH
RELOC. RAMP-TE @ STA. 28+28.6, 110' RT.
CONSTRUCT MON. RELOCATED RAMP 'TE' @
STA. 29+00.00, 55' RT.
CONSTRUCT CONCRETE SIDEWALK, 6' WIDE
BEGIN CHAIN LINK FENCE, 10' HIGH
RELOC. RAMP TE @ STA. 29+35, 65' RT.
ANGLE POINT CHAIN LINK FENCE,
RELOC. RAMP TE @ STA. 29+35, 71' RT.
~~CONSTRUCT WROUGHT IRON FENCE, 4' HIGH~~
CONSTRUCT WROUGHT IRON FENCE, 10' HIGH
CONSTRUCT STEPS AND PARAPET WALL
SAWCUT AND REMOVE EXISTING ASPHALT 4' BEHIND PROP. WROUGHT IRON FENCE
CONSTRUCT TOPSOIL, SEEDING AND MULCHING
CONSTRUCT TYPE 'B' PAVEMENT
ANGLE POINT WROUGHT IRON FENCE @ STA. 12+10, 35' RT.
ANGLE POINT WROUGHT IRON FENCE, 10' HIGH @ STA. 12+10, 42.5' RT.
TEMPORARY CONST. EASEMENT
CONSTRUCT CONCRETE SIDEWALK - VARIES
PROPOSED R.O.W. LINE
6' WIDE GATE
TOPSOILING, FERTILIZING AND SEEDING
CONSTRUCT CONCRETE SIDEWALK, 4" THICK
4 Sty. Brick Building
Existing Line
SEE DETAIL "A" CONSTRUCTION DETAILS
FIRST STREET
RESET EXIST. RIM BY BELL ATL. CORP.
POLES BY PSE&G
PARCEL D-5 217 2½ Sty. Brick Building
RESET EXIST. RIM BY PSE&G
SEE NOTE 2
CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB
RELOCATE HYDRANT
PARCEL D-6 217
CONSTRUCT SCORED CONC. SIDEWALK - 10' WIDE
CONSTRUCT MON. SUSSEX AVE. CONN. @ STA. 30+81.35, 25' RT.
N/A SW. Brick Building
PARCEL D-8 218
PARCEL D-7 217
CONSTRUCT CHAIN LINK FENCE, PVC-COATED STEEL, 8' HIGH
SEE NOTE 1
STA. 33+00 30' RT
INFILTRATION AREA
NO ACCESS
MATCH LINE SUSSEX AVE. CONNECTOR @ STA. 34+20 SHEET C-1
SUSSEX AVE. CONNECTOR @ & PGL
TEMPORARY CHAIN LINK FENCE, 6' HIGH SEE NOTE 3
PC STA. 30+81.35
CONSTRUCT TYPE 'C' PAVEMENT
PROP. CONSTRUCTION AND MAINTENANCE
PROPOSED R.O.W. LINE NO ACCESS
MORRIS CANAL RUINS
CONSTRUCT MON. SUSSEX AVE. CONN. @ STA. 32+97.96, 25' RT.
PT STA. 32+97.96
CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB
NON VEGETATIVE SURFACE BITUMINOUS CONCRETE
CONSTRUCT CHAIN LINK FENCE, PVC-COATED STEEL, 6' HIGH
CONSTRUCT CHAIN LINK FENCE PVC-COATED STEEL 5' HIGH ON TOP OF CONC. BARRIER CURB
END RETAINING WALL NO. 1 SUSSEX AVE. CONNECTOR B STA. 33+70, 16.75' LT.
CONSTRUCT BEAM GUIDERAIL AND RUB RAIL
BEAM GUIDERAIL ATACHMENT ~~TYPE B~~ (SEE BRIDGE PLANS)
E 579150 N 698100

RELOCATED RAMP-TE @ & PGL
RAMP TWF @ & PGL
RAMP-TWF
N58°19'00"W
S49°42'34.1"E 55'-2'407.8"E
POT STA. 651+55.77
BITUMINOUS PAVEMENT
Asphalt Overlay Steel Pavement
Vault
Paved Parking
Asphalt Parking Lot
Existing R.O.W. Line
Conc. Sdwk.
Asphalt
Steel
Dirt Piles
Brush
Concrete
Asphalt Overlay
Asphalt Overlay Concrete Pavement
Asphalt Overlay Asphalt Pavement

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	10	

NOTE:
SEE BRIDGE PLANS, SHEET B-7,
FOR ADDITIONAL GUIDE RAIL
AT OVER HEAD SIGN STRUCTURE

POC
STA. 645+00.00

RELOC. RAMP-TE B STA 28+00.00+
EXIST. RTE. 75 STA. LINE
STA. 645+96.80, 24' RT.

MEET EXISTING PAVEMENT,
CURB AND CONCR. BARRIER

10' CURB
TRANSITION

CONSTRUCT 9"x16" WHITE
CONCRETE VERTICAL CURB

CONSTRUCT 4" WHITE
CONCRETE ISLAND

PCC
STA. 23+74.21

CONSTRUCT 15" X 41"
WHITE CONCRETE
BARRIER CURB

PCC
STA. 647+86.75

CONSTRUCT WHITE CONCRETE
ISLAND, 4" THICK

PT
STA. 25+28.65

CONSTRUCT MONUMENT
RELOCATED RAMP TE B
STA. 25+28.65, 40' RT.

PCC
STA. 648+35.75

REMOVE EXISTING
CONCRETE PAVEMENT

BEAM GUIDE RAIL ATTACHMENT
TYPE A SEE CD-53

CONSTRUCT 6" CONC. MEDIAN
END WALL STA. 26+20.00

END 15"x41" W.C. BARRIER CURB
BEGIN 9"x16" W.C. VERTICAL CURB

PT
STA. 649+35.75

BEAM GUIDE RAIL
ANCHORAGE RAMP-TWF
@ STA. 53+25, ~~33~~ 33' RT.

REMOVE EXISTING RAMP-TE PAVEMENT
CONSTRUCT TOPSOIL, SEEDING AND MULCHING.

EXIST. CHAIN LINK FENCE TO REMAIN

MEET EXIST. CHAIN LINK FENCE

MEET EXIST. SIDEWALK

REMOVE EXISTING
ASPHALT PAVEMENT

CONCRETE SIDEWALK

CONSTRUCT TYPE 'A'
PAVEMENT

CONSTRUCT CHAIN LINK FENCE, PVC-COATED STEEL, 10' HIGH

REMOVE EXISTING FENCE

CONSTRUCT CONCRETE SIDEWALK, 8' WIDE

CONSTRUCT WHITE
CONCRETE ISLAND, 4" THICK

EXISTING FENCE TO REMAIN

REMOVE EXISTING SIDEWALK
CONSTRUCT TOPSOIL, SEEDING
AND MULCHING

MEET EXISTING PAVEMENT, CURB AND CONC. BARRIER

10' CURB TRANSITION

RTE. 75 STATION LINE STA 645+00.00+
RAMP TWF ℄ STA. 57+87.92, 12' LT.

BEGIN PROJECT AND
FEDERAL PROJECT
NO. HDP-9246(005)
℄ STA. 645+00.00
RAMP-TWF STA. 57+87.92

N.J. PLANE COORDINATE SYSTEM

ROUTE 280 EB

Existing Rte. 75 Station Line

Asphalt Shoulder | Concrete Pavement | Asphalt Shoulder | Asphalt Overlay | Asphalt Shoulder | Concrete Pavement

TG 129.03
Inv. 122.79 (15" In)
Inv. 122.76 (15" Out)

TG 129.06
Inv. 122.73 (15" In)
Inv. 122.65 (15" Out)

RAMP TW ℄ STA 44+45.36+
RAMP TWF ℄ STA. 56+89.54, 36' RT.

Rim 130.83
Inv. 122.33 (15" In)
Inv. 125.83 (15" In)
Inv. 121.40 (24" Out)

E 578550
N 699000

15" RCP

TG 130.60
Inv. 127.20 (6" In)
Inv. 126.30 (15" Out)

TG 129.67
Inv. 124.67 (6" In)
Inv. 121.17 (15" Out)

TWF

TE-1

75-1

6" CMP

15" RCP

R-2176

'B'

Inv. 123.63

36' | 12'

Asphalt Overlay

Concrete Pavement

Asphalt Shoulder

Asphalt Shoulder

Asphalt Overlay

Asphalt Shoulder

24" RCP

R-2048

15" RCP

Inv. 127.58
Inv. 124.02
Inv. 124.06

6" Metal

Inv. 124.90

WHITE CONCRETE
ISLAND, 4" THICK

Rim 133.60
Inv. 128.60 (12" In)
Inv. 128.20 (15" In)
Inv. 127.70 (21" Out)

TE-2

RELOCATED RAMP TE B & PGL

24

R-2212

N56° 59' 56" W

30.35'

5.85'

24'

VAR.

23.56'

PC
STA. 55+47.39

75-2

PCC
STA. 647+86.75

Concrete

Abandoned Roadway

R-1650'

16.53'

24" RCP

R-4048

Rim
Inv. 128.4

BEAM GUIDE RAIL ATTACHMENT
TYPE A SEE CD-53

WHITE CONCRETE ISLAND, 4" THICK

PT
STA. 42+50.50

CONSTRUCT 12" x 13" WHITE
CONCRETE SLOPING CURB

CONSTRUCT 9" x 16" WHITE
CONCRETE VERTICAL CURB

Rim 132.50
Inv. 129.00

PCC
STA. 41+70.00

CONSTRUCT MON. RAMP TWF ℄
STA. 54+00.00, 40' RT.

BEGIN 15"x41" WHITE
CONC. BARRIER CURB

~~END~~ PROP. CHAIN LINK
FENCE, 4' HIGH
RAMP TW ℄ STA. 41+00, 28' LT.

REMOVE EXISTING
BEAM GUIDE RAIL

NON VEGETATIVE SURFACE
BITUMINOUS CONCRETE

CONSTRUCT TYPE A
PAVEMENT

37.5' PARABOLIC FLARE

POC
STA. 40+00.00
10' CURB
TRANSITION

12" RCP

MEET EXISTING PAVEMENT
& CURB STA. 40+00.00

SAWCUT

10' CURB
TRANSITION

MILLINGS

REMOVE EXISTING
ASPHALT PAVEMENT

NON VEGETATIVE SURFACE
BITUMINOUS CONCRETE

CONSTRUCT TOPSOIL,
SEEDING AND MULCHING

CONSTRUCT CHAIN LINK FENCE,
PVC-COATED STEEL 4' HIGH

REMOVE EXISTING CONCRETE PAVEMENT

TOP OF
SLOPE

CONSTRUCT TYPE A
PAVEMENT

CONSTRUCT SRT RAMP-TWF ℄
STA. 41+94.9' LT.

CONSTRUCT BEAM GUIDE RAIL
~~AND RUB RAIL~~

CONSTRUCT 9" x 16" WHITE
CONCRETE VERTICAL CURB

RAMP-TWF ℄ & PGL
RAMP<TWF

N53° 19' 00" W
83.46'

R-150'

R-90'

R-1'

R-325'

R-150'

RAMP TW ℄ & PGL
RAMP-TW

TG 135.71
Inv. 132.21

TG 130.05
Inv. 123.21

TG 136.16
Inv. 131.80 (12" In)
Inv. 131.26 (15" In)
Inv. 130.54 (12" Out)

GATE
10' WIDE

MILLINGS

REMOVE EXISTING
ASPHALT PAVEMENT

NON VEGETATIVE SURFACE
BITUMINOUS CONCRETE

CONSTRUCT TOPSOIL,
SEEDING AND MULCHING

CONSTRUCT CHAIN LINK FENCE,
PVC-COATED STEEL 4' HIGH

REMOVE EXISTING CONCRETE PAVEMENT

CONSTRUCT TYPE A
PAVEMENT

CONSTRUCT SRT RAMP-TWF ℄
STA. 41+94.9' LT.

CONSTRUCT BEAM GUIDE RAIL
~~AND RUB RAIL~~

CONSTRUCT 9" x 16" WHITE
CONCRETE VERTICAL CURB

REMOVE EXISTING ASPHALT
PAVEMENT AND CURBING
CONSTRUCT TOPSOIL, SEEDING
AND MULCHING-SEE NOTES 1 & 2

CONVERT INLET, TYPE 'B'
TO INLET, TYPE 'E'
T.G.=131.00

B.M.
T-7

CONSTRUCT CONCRETE
SIDEWALK, 8' WIDE

Rim 130.15
Inv. 127.28

Inv. 126.05

15" RCP

CONSTRUCT 9" x 16"
CONCRETE VERTICAL CURB

CONSTRUCT 2-PINUS STROBUS, BB.
5'-6" HIGH

Inv. 126.45

REMOVE EXISTING
GUIDERAIL

CHAIN LINK FENCE
PVC COATED STEEL, 4' HIGH

CONSTRUCT SRT
IN THE VICINITY
OF THE EXIST.
BEAM GUIDERAIL
END TREATMENT

ORANGE STREET

Stone Bridge

Concrete Sidewalk

TG 128.15
Inv. 119.50

TG 127.66
Inv.

Inv. 119.50

NOTES:
1. AREA UNDER VIADUCT TO BE COVERED WITH NON-VEGETATIVE SURFACE TO THE OUTSIDE DRIP LINE.
2. NON-VEGETATIVE SURFACE CAN BE EITHER MILLINGS OR BROKEN STONE, 4" THICK.

B.M. T-7 ELEV. = 130.909, PK NAIL IN THE CONCRETE SIDEWALK EXPANSION JOINT ON THE NORTHEASTERLY CORNER OF ORANGE STREET AND THIRD STREET; 286' RIGHT OF THE RAMP 'TWF' BASELINE STATION 55+52.00.

30' 15' 0 30' 60'
SCALE IN FEET

C-3 / C-3

MATCH LINE RELOC. RAMP-TE ℄
STA. 28+00 SHEET C-2

E 578400
N 698500

E 578550
N 698400

Abandoned Roadway

Brush

N58° 24' 01" E

RELOCATED RAMP TE B

649+42.34, P.E.

27'

100.0'

Asphalt Pavement

Concrete Pavement

Abandoned Roadway

Asphalt Shoulder

Asphalt Shoulder

Asphalt Shoulder

Asphalt Pavement

Asphalt Pavement

Asphalt Pavement

Concrete Pavement

Abandoned Roadway

Asphalt Pavement

Asphalt Pavement

Asphalt Pavement

STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	11	

30 15 0 30 60
SCALE IN FEET

LEGEND

INLET SEDIMENT TRAP — TYPE 'B' & 'E' INLETS

INLET FILTER — TYPE 'B' & 'E' INLETS

SILT FENCE

PROPOSED R.O.W. LINE

EXISTING R.O.W. NO ACCESS

EXISTING R.O.W.

CONSTRUCTION EASEMENT

CEDS - CLEAN EXISTING DRAINAGE STRUCTURE

CEP - CLEAN EXISTING PIPES

INLETS WITH HOODS & SUMPS

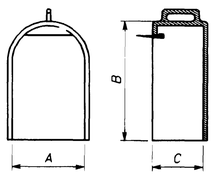
LOCATION		INLET	PIPE	NOMINAL DIMENSIONS(inches)		
STREET	STATION	TYPE	SIZE(inches)	A	B	C
SUSSEX AVE.	19+51, Baseline	B	15	18	27	9
SUSSEX AVE.	19+60, 38' RT.	B	15	18	27	9
SUSSEX AVE.	21+73, Baseline	B	15	18	27	9
FIRST ST.	6+65, 25' RT.	B	15	18	27	9
FIRST ST.	6+57, 37' LT.	B	15	18	27	9
FIRST ST.	15+01, 25' RT.	B	15	18	27	9
RAMP 'TE'	29+28, 48' RT.	B	15	18	27	9
RAMP 'TWF'	50+50, 38' RT.	E	18	20	27	10
RAMP 'TE'	29+90, 34' RT.	A	15	18	27	9

NOTES: 1) STANDARD TYPE CAST IRON TRAP.

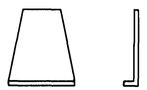
2) ALL ABOVE INLETS SHALL HAVE SUMP 2 FEET BELOW THE INVERT OF THE OUTLET PIPE.

3) WALL PLATES WILL NOT BE REQUIRED.

STANDARD CATCH BASIN TRAP

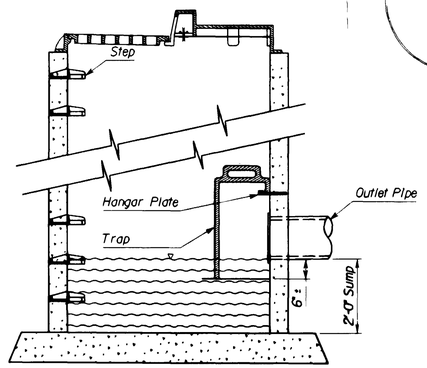


CAST IRON HOOD

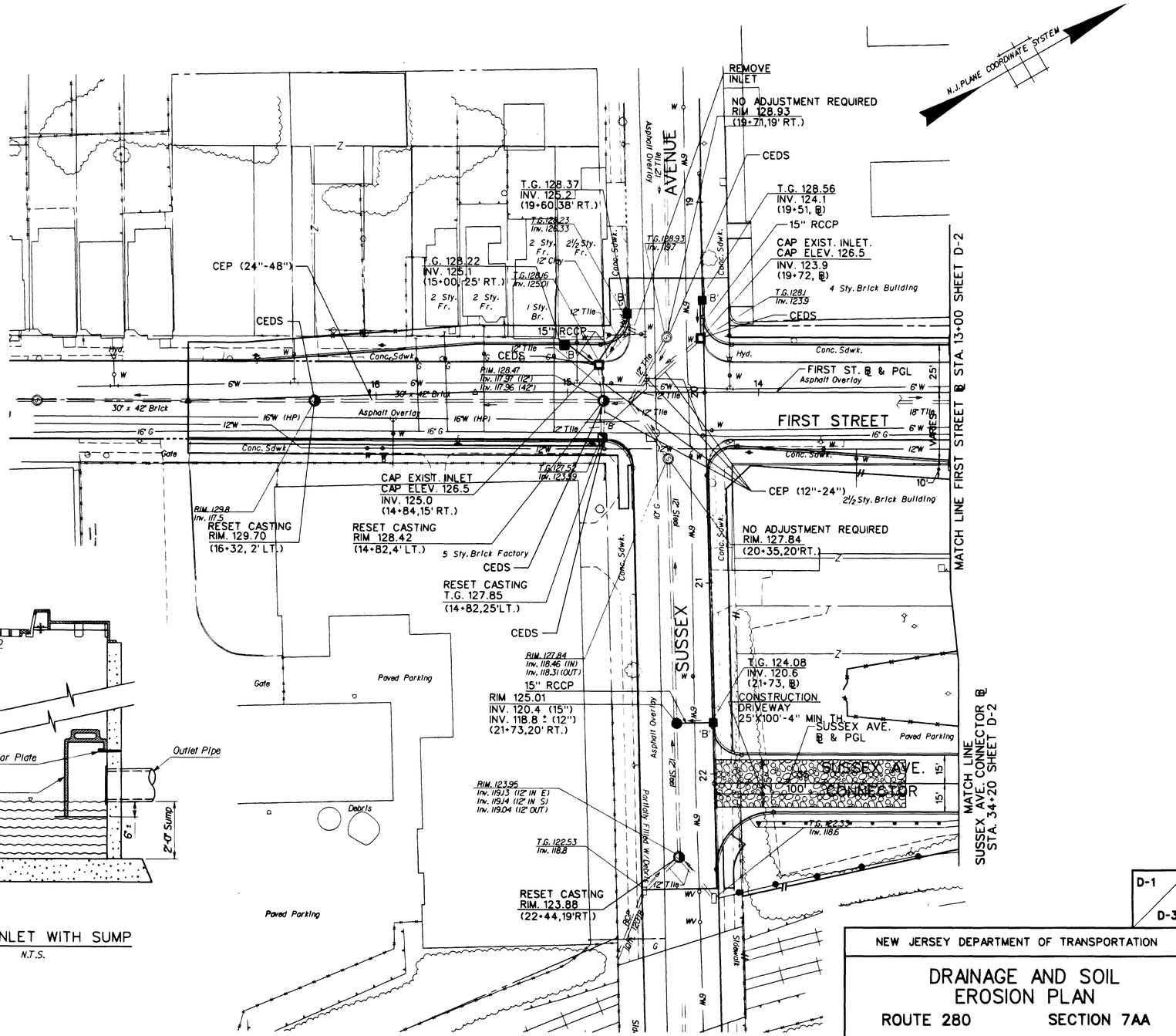


CAST IRON HANGAR PLATE

NOTE: Cast Iron Hangar Plate furnished with hood



TYPICAL INLET WITH SUMP
N.T.S.



D-1 / D-3

GENERAL NOTES

1. ALL INLETS SHALL BE NJDOT TYPE 'B', WITH 4" CURB PIECE HAVING A 1" CURB OPENING AND BICYCLE SAFE GRATES UNLESS OTHERWISE INDICATED.

REVIEWED BY: Raina T. Zimmermann
RAINER T. ZIMMERMANN, P.E.
P.E. N.J. LIC. NO. 17074

ACCEPTED BY: Michael D. Dipento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
FIRST ST.	LOU			DEC. 97

SUBMITTED BY: Paul J. Scagnelli 1/20/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

DRAINAGE AND SOIL EROSION PLAN

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis K. Robbins 1/22/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

11

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	12	

SCALE IN FEET 30 15 0 30 60

N.J. PLANE COORDINATE SYSTEM

MATCH LINE RELOC. RAMP-TE @ STA. 28+00 SHEET D-3

MATCH LINE FIRST STREET @ STA. 13+00 SHEET D-1

MATCH LINE SUSSEX AVE. CONNECTOR @ STA. 34+20 SHEET D-1

T.G. 127.42
INV. 123.1
(28+75,48'RT.)

CONSTRUCTION DRIVEWAY
25'x100' (4" MIN. TH.)

15" RCCP

T.G. 125.60
INV. 121.65 (15")
INV. 121.4 (18")
(29+28,48'RT.)

Paved Parking

T.G. 127.12
INV. 123.1
(12+95,25'RT.)

T.G. 126.52
INV. 122.5
(11+75,25'RT.)

Sty. Brick Building

RESET CASTING
RIM. 127.38
(12+73,5' LT.)

Asphalt

T.G. 126.04
INV. 122.1
(11+00,27'RT.)

T.G. 124.87
INV. 121.3 (18")
INV. 117.4± (36")
(29+26,66'RT)

T.G. 124.75
INV. 121.84 (15")
INV. 121.59 (18")
(29+61,61'RT.)

REMOVE PIPE & INLETS

CONC. PLUG

T.G. 125.39
Inv. 120.89

Vault

Parking

18" RCCP

15" RCCP

Sign

RELOCATED RAMP-TE
RELOCATED RAMP-TE @ & PGL

S.O.D.

RAMP TWF @ & PGL

RAMP-TWF

T.G. 127.86
INV. 123.4
(28+75,26'LT.)

T.G. 127.89
INV. 122.4
(51+15,8')

T.G. 126.04
INV. 123.1
(29+29,26'LT.)

T.G. 126.34
INV. 122.9 (15")
INV. 120.3 (18")
(29+13,45'LT.)

T.G. 125.70
INV. 122.1 (15")
INV. 120.1 (18")
(50+51,5'LT.)

Brush

T.G. 125.13
INV. 120.6
(50+29,22'LT.)

T.G. 126.26
INV. 120.1
(50+70,37'RT.)

Rim 123.9
Inv. 117.5(12')
Inv. 112.0(15')
Inv. 111.3(36')

4' BOTTOM WIDTH
DITCH GRASS LINED
W/2:1 SIDE SLOPES

T.G. 126.10
INV. 119.9
(50+50,38'RT.)

FL. 123.8±

FL. 123.6±

FL. 123.1±

Conc. Sdwk.

CEDS

CONC. PLUG

CONC. PLUGS

FIRST ST. @ & PGL

FIRST STREET

12'W (HP)

Asphalt Overlay

Rim 127.37
Inv. 117.54

Rim 127.26
Inv. 118.3 (15" IN)
Inv. 118.5 (12" IN)
Inv. 119.2 (18" IN)

Rim 125.0
Inv. 116.98(15")
Inv. 116.65(30")

Rim 125.64
Inv. 116.80

Rim 124.7
Inv. 113.97

Rim 124.67
Inv. 115.90

T.G. 125.64
Inv. 121.34

T.G. 125.24
Inv. 121.39

T.G. 125.01
Inv. 114.71

15" RCCP Inv. 114.71

CEP (12"-24")

CEP (24"-48")

EXTEND EXIST. 15" RCCP

RIM 125.87
(9+70,7'RT.)

T.G. 124.8
Inv. 120.98

REMOVE INLETS

SILT FECE

1 Sty. Brick Garage

2 Sty. Brick High Volt Bldg.

Concrete

T.G. 124.50
INV. 120.6
(7+80,37'LT.)

RIM 125.10
(8+04,5'LT.)

CONNECT EXIST. 8" CMP

T.G. 123.80
INV. 119.3
INV. 116.0±
(6+57,37'LT.)

5 Sty. Brick Factory

RESET CASTING
RIM 125.29
INV. 117.5
(8+53,6'RT.)
TO CLEAR
UNDER 8" W

RIM 124.36
(6+50,5'LT.)

REMOVE PIPE & INLET

T.G. 124.10
INV. 117.5 (15")
INV. 117.15 (18")
(6+65,25'RT.)

T.G. 123.57
Inv. 121.01

T.G. 123.00
INV. 118.2 (12")
INV. 117.7 (15")
(6+68,45'RT.)

RESET CASTING
RIM 124.35
INV. 117.00
(6+66,8'RT.)

T.G. 124.62
INV. 120.9
(7+80,25'RT.)

T.G. 124.52
INV. 120.00
(6+29,50'RT.)

NO ADJUSTMENT REQUIRED
RIM 124.87
(6+15,52'RT.)

Stand Bridge

12in. Metal

Rim 124.26
Inv. 115.18

Rim 124.87

CEDS
REMOVE EXIST. INLET

CEP (24"-48")

36" RCCP

72" RCCP

Full of Debris

Asphalt Overlay

ROUTE 280 E.B.

ROUTE 280 W.B.

T.G. 126.94
INV. 122.5
(12+95,36'LT.)

2½ Sty. Brick Building

T.G. 126.77
INV. 122.0 (S)
INV. 120.3 (N+E)
(12+00,37'LT.)

15" RCES
INV. 116.2
(12+00,139.20'LT.)

RIPRAP APRONS
d_{50}=3", 6" THICKNESS
W/O$_w$ FILTER FABRIC

18" RCES
INV. 116.1
(33+32, 28.20'RT.)

RESET CASTING
RIM 126.65
(11+27,4'LT.)

RIM 126.14
INV. 123.30
(10+47,7'RT.)

T.G. 125.74
INV. 121.0
(10+53,37'LT.)

STOCK PILE LOCATION

1½ Sty. Brick Building

T.G. 120.24
INV. 117.0
(32+75,20'RT.)

CONSTRUCTION DRIVEWAY
25'x100' (4" MIN. TH.)

SUSSEX AVE. CONNECTOR @ & PGL

Dirt Piles

RR

T.G. 120.42
INV. 116.6 (15")
INV. 116.3 (18")
(33+31,15'RT.)

D-2

NEW JERSEY DEPARTMENT OF TRANSPORTATION

DRAINAGE AND SOIL EROSION PLAN

ROUTE 280 SECTION 7AA

REVIEWED BY: Rainer T. Zimmermann
RAINER T. ZIMMERMANN, P.E.
P.E. N.J. LIC. NO. 17074

ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

GOODKIND & O'DEA, INC.
Louis R. Robbins 1/29/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

12

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP. 98
FIRST ST.	LOU			DEC. 97

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	13	

30 15 0 30 60
SCALE IN FEET

N.J. PLANE COORDINATE SYSTEM

RESET CASTING
T.G. 129.12
(56+35, 10' LT.)

T.G. 129.32
(23+55, 21' LT.)

T.G. 127.85
(23+58, 35' RT.)

ROUTE 280 EB

Asphalt Shoulder
Concrete Pavement
Asphalt Overlay

T.G. 129.03
Inv. 122.79 (15" In)
Inv. 122.76 (15" Out)

CEDS

T.G. 129.06
Inv. 122.73 (15" In)
Inv. 122.65 (15" Out)

CEDS

T.G. 127.67
Inv. 123.67 (6" In)
Inv. 123.47 (15" Out)

CEDS

Rim 130.83
Inv. 122.33 (15" In)
Inv. 125.83 (15" In)
Inv. 121.40 (24" Out)

RESET CASTING
RIM 130.70
INV. 125.50 (PROP. 18")
(43+90, ℄)

6" CMP
15" RCP
Inv. 123.53
S.O.D.
9'
24" RCP
15" RCP
T.G. 130.60
Inv. 127.20 (6" In)
Inv. 126.30 (15" Out)

CEP (12"-24")

Inv 127.68
Inv. 124.02
Inv. 124.06
6" Metal
S.O.D.
56'
15" RCP
6" CMP
Inv. 124.90

RESET CASTING
T.G. 130.4
(43+90, 8' RT.)

REMOVE EXIST.
PIPES AND INLETS

Rim 133.60
Inv. 128.60 (12" In)
Inv. 128.20 (15" In)
Inv. 127.70 (21" Out)

T.G. 132.26
INV. 128.20 (15" IN)
INV. 127.95 (18" OUT)

Abandoned Roadway
Concrete
RELOCATED RAMP-TE ℄ & PGL
18" RCCP
2" RCCP
Rim.
Inv. 128.4
RCCP
15" RCCP
T.G. 132.17
INV. 128.42 (IN)
INV. 128.30 (OUT)

Grass
Rim 130.05
Inv. 127.28
Inv. 126.03
'B'
Vault
15" RCCP
T.G. 131.00
'E'
Inv. 126.86
Vault

Rim 132.50
Inv. 129.00
T.G. 132.50
INV. 129.00

6in
Tile
Grass

Asphalt Pavement

REMOVE EXIST.
PIPES AND INLETS

36" RCCP
Vault
Inv. 124.50
Inv. 128.00
Inv. 133.8
18" RCCP
12" RCP 'E'
'B'
12" RCP
12" RCP
Asphalt Shoulder
Asphalt Pavement
Inv. 133.8
15" RCCP
Abandoned Roadway
RELOCATED RAMP-TE ℄
Asphalt Shoulder
Asphalt Shoulder
Inv. 132.9
Inv. 132.4
Concrete Pavement
Abandoned Roadway
Asphalt Pavement
RAMP-TWF ℄ & PGL
RAMP-TWF
2" RCCP
Asphalt Shoulder
Asphalt Pavement
60.55
T.G. 135.71
Inv. 132.21
CEDS (6.8' DEEP)
RESET CASTING
T.G. 130.14
(40+13, ℄)
CEP (12"-24")
T.G. 130.05
Inv. 123.21
RAMP TW ℄ & PGL
RAMP-TW
T.G. 136.16
Inv. 131.80 (21" In)
Inv. 131.26 (15" In)
Inv. 130.54 (21" Out)
Inv. 119.50
MH
2" RCCP
12" RCP
ORANGE STREET
UNDERGROUND LAMAR ON
8" CMP
6" CMP WH
8" CMP
Brush
12' 12' 12' 12' 12' 12' 2'
5.2
12' 12' 2.5'
MATCH LINE RELOC. RAMP-TE ℄
STA. 28+00 SHEET D-2

D-3
D-3

NEW JERSEY DEPARTMENT OF TRANSPORTATION

DRAINAGE AND SOIL EROSION PLAN

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis Robbins 11/24/97
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

13

SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Rainer T. Zimmermann
RAINER T. ZIMMERMANN, P.E.
P.E. N.J. LIC. NO. 17074

ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE

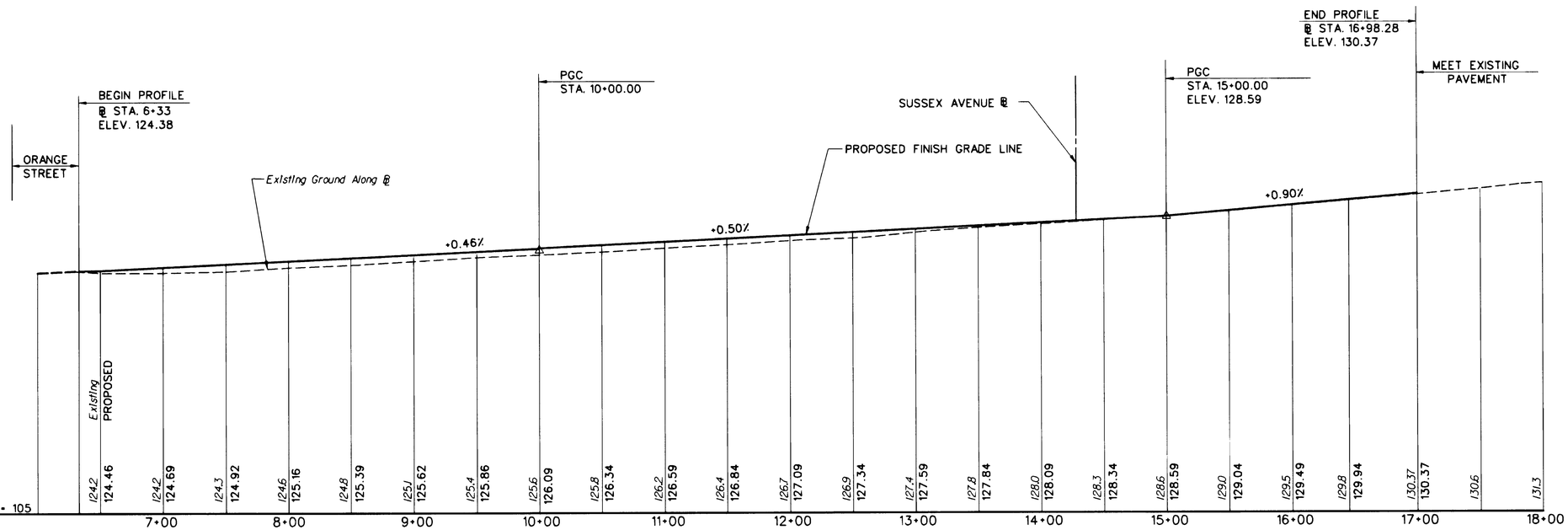
Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	14	

HOR. 50' 25' 0 50' 100'
VERT. 5 2.5 0 5' 10'
SCALE IN FEET



FIRST STREET
V-30 M.P.H.

P-1
P-3

PGC - POINT OF GRADE CHANGE

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PROFILES

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis Robbins 4/29/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: AS SHOWN

14

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Pento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

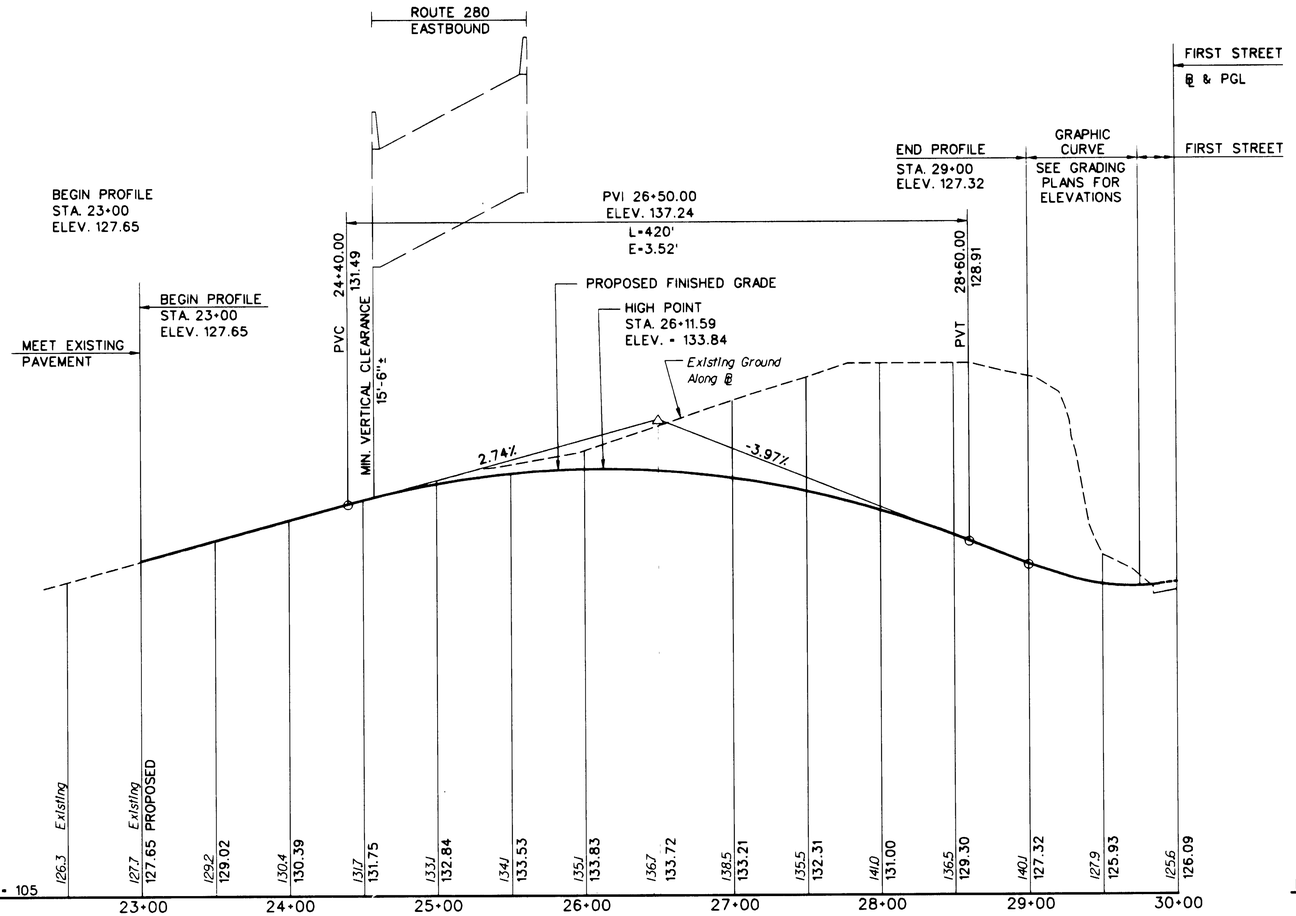
REVISION	BY	REV'D	ACC'D	DATE
FIRST ST.	LOU			DEC.'97

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

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Detail Checked by

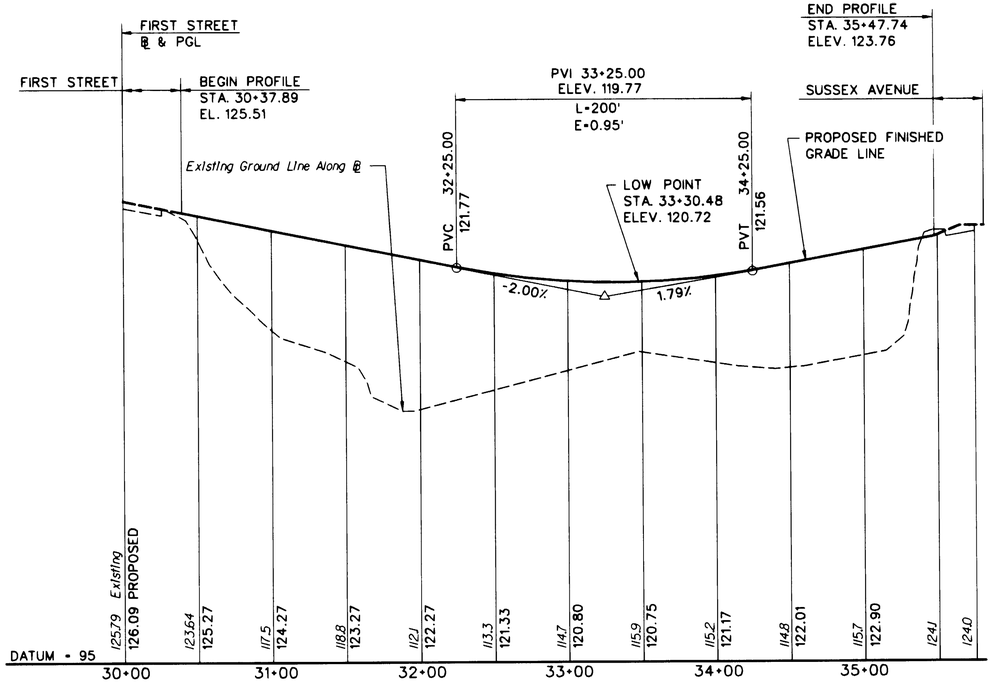
STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	15	

HOR. 50' 25' 0 50' 100'
VERT. 5 2.5' 0 5' 10'
SCALE IN FEET



RELOCATED RAMP-TE

V=40 M.P.H.



SUSSEX AVE. CONNECTOR

V=30 M.P.H.

E- DIFFERENCE BETWEEN P.V.I. ELEVATION AND VERTICAL CURVE ELEVATION AT THE P.V.I. STATION.

P-2

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PROFILES

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis Robbins 1/22/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: AS SHOWN

15

SUBMITTED BY: Paul J. Scagnelli 1/20/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Dipento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
FIRST ST.	LOU			DEC.'97

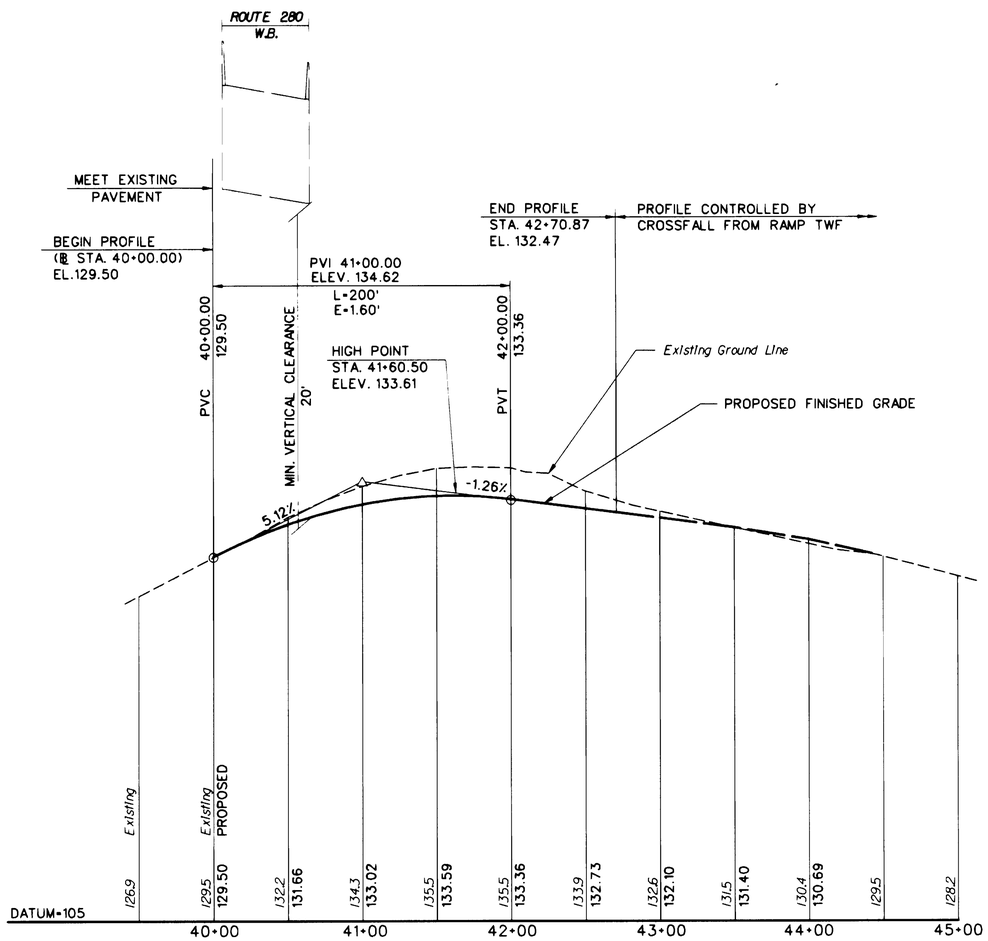
Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
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Design Checked by
Detailed by
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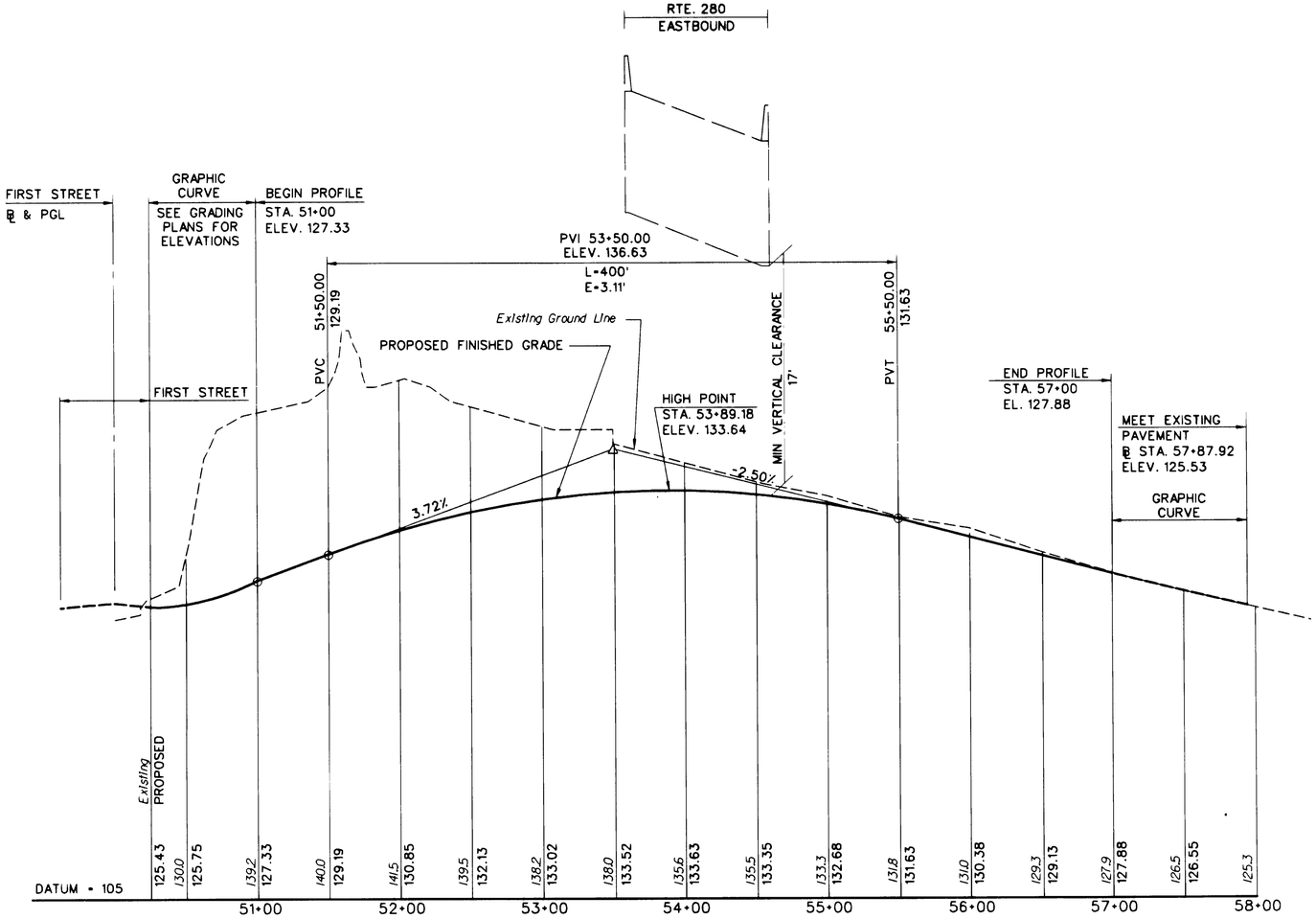
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STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	16	

HOR. 50' 25' 0 50' 100'
VERT. 5 2.5' 0 5 10'
SCALE IN FEET



RAMP-TW
V=25 M.P.H.



RAMP-TWF
V=40 M.P.H.

P-3
P-3

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PROFILES

ROUTE 280 SECTION 7AA

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Lento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
FIRST ST.	LOU			DEC.' 97

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

GOODKIND & O'DEA, INC.
Louis K. Robbins 1/29/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: AS SHOWN

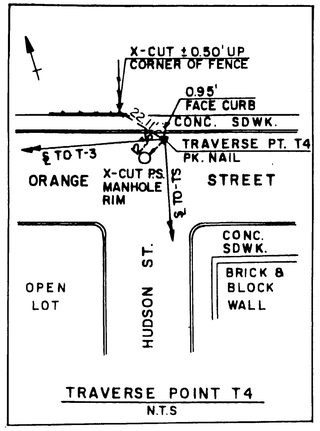
16

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

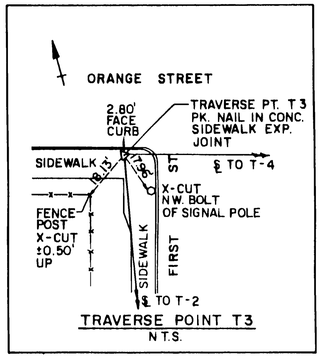
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DATES
STAGES

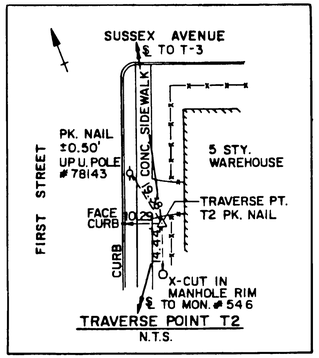
STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	17	



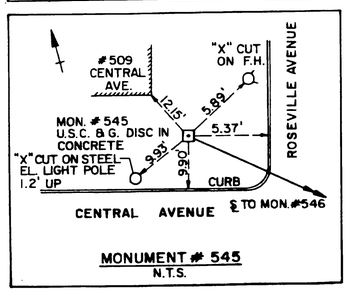
TRAVERSE POINT T4
N.T.S



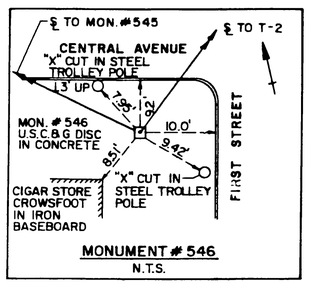
TRAVERSE POINT T3
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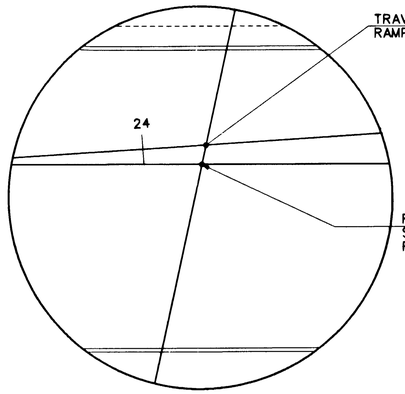
TRAVERSE POINT T2
N.T.S.



MONUMENT # 545
N.T.S.

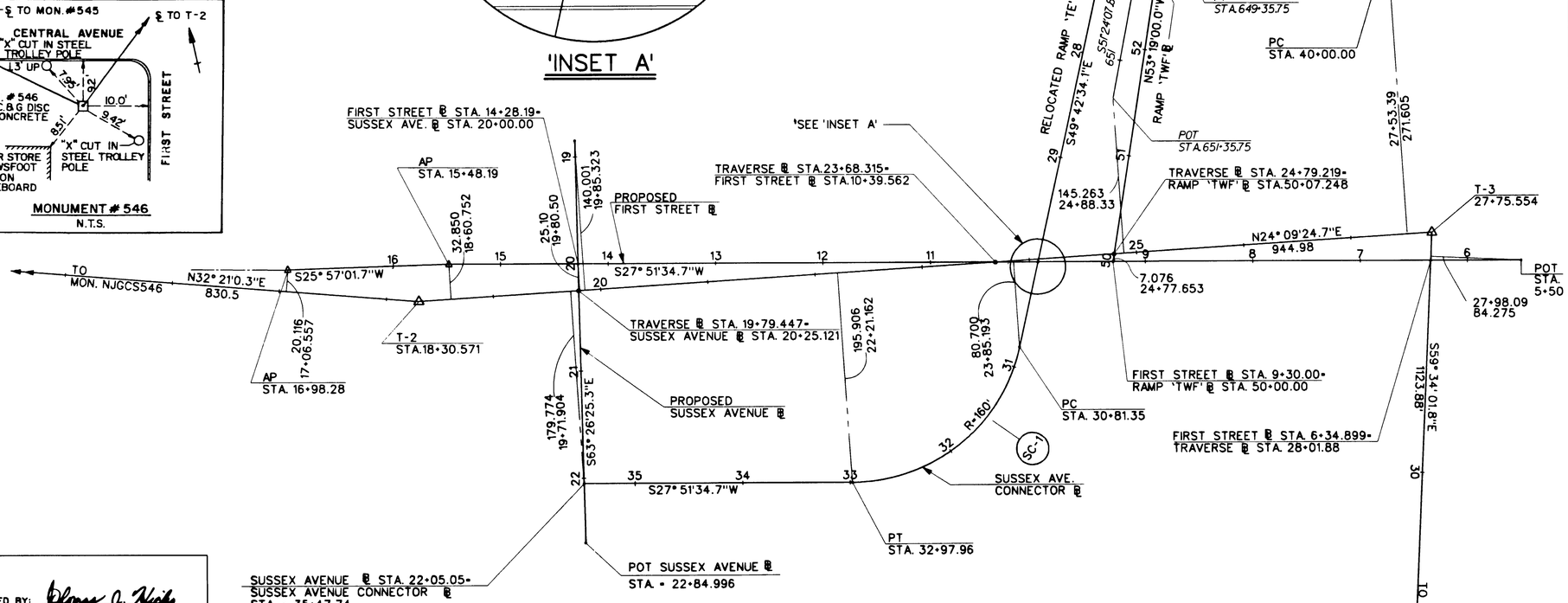


MONUMENT # 546
N.T.S.



'INSET A'

MONUMENT # 546
N.T.S.



PROPOSED MONUMENTS

BASELINE	STATION	OFFSET	COORDINATES NORTH	COORDINATES EAST
SUSSEX AVENUE CONNECTOR	PT STA. 32+97.96	25' RT.	698,188.248	579,058.101
SUSSEX AVENUE CONNECTOR	PC STA. 30+81.35	25' RT.	698,354.309	579,026.048
RELOCATED RAMP-TE	POT STA. 29+00.00	55' RT.	698,448.698	578,868.319
RELOCATED RAMP-TE	PC STA. 25+28.65	40' RT.	698,700.280	578,594.760
RAMP-TWF 51+25.00	POT STA. ~~51+00.00~~	5' ~~40'~~ LT.	698,539.590	578,926.705
RAMP-TWF	POT STA. 54+00.00	40' RT.	698,758.905	578,715.990

BENCHMARKS & TRAVERSE POINTS	COORDINATES NORTH	COORDINATES EAST	ELEVATION
TP-T-2	697,900.35	578,741.61	129.288
TP-T-3	698,762.58	579,128.33	124.584
BM-T-7	699,046.99	578,740.93	130.909
TP-T-4	698,193.30	580,097.37	125.72

MONUMENTS USED TO TIE TRAVERSE			
MONUMENT	COORDINATES NORTH	COORDINATES EAST	ELEVATION
NJGCS545	697,764.07	576,709.94	182.71
NJGCS546	697,198.73	578,297.21	137.89

BASELINE	FROM POINT ON TRAVERSE	TO POINT ON BASELINE	BEARING	DISTANCE FT.
RELOCATED RAMP-TE	T-3	P.C. STA. 25+28.650	S86° 25' 02.4"W	508.701
RELOCATED RAMP-TE	T-3	P.C.C. STA. 23+74.210	N84° 20' 27.9"W	633.092
RELOCATED RAMP-TE	T-3	P.O.C. STA. 23+00.000	N81° 27' 30.0"W	699.319
ROUTE 75 (STATION LINE)	T-3	P.T. STA. 649+35.750	S79° 09' 19.0"W	413.786
ROUTE 75 (STATION LINE)	T-3	P.C.C. STA. 648+35.750	S88° 07' 35.4"W	485.120
ROUTE 75 (STATION LINE)	T-3	P.C.C. STA. 647+35.750	N85° 28' 00.1"W	566.168
ROUTE 75 (STATION LINE)	T-3	P.C.C. STA. 645+00.000	N77° 03' 18.2"W	780.681
RAMP-TWF	T-3	P.C. STA. 55+47.390	N84° 36' 43.5"W	556.889
RAMP-TWF	T-3	P.O.C. STA. 57+87.920	N76° 12' 40.9"W	777.155
RAMP-TW	T-3	P.C.C. STA. 41+70.000	N85° 21' 28.1"W	413.614
RAMP-TW	T-3	P.T. STA. 42+50.500	N83° 16' 26.1"W	491.441
RAMP-TW	T-3	P.O.T. STA. 44+45.360	N75° 53' 45.3"W	671.731

T-1 / T-2

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TIES

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis Robbins 1/29/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: N.T.S.

17

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP. 98
FIRST ST	LW			DEC '97

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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19 NOV 97
16:13:42

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	18	

TABLE OF COORDINATES, CURVE DATA AND ALIGNMENT DATA

ROUTE 75 STATION LINE

Curve No.	Pt. Type	Station	Coordinates N	Coordinates E	Curve Center Coordinates N	Curve Center Coordinates E	Delta or Tan Brg	L	T	R	Dc
	PC	645+00.000	698937.463	578367.493			S59 32 50.2E				
75-1	PI	646+17.988	698877.663	578469.205	697040.958	577252.474	6 08 23.1	235.750	117.988	2200.000	2 36 15.7
	PT	647+35.750	698807.328	578563.937			S53 24 27.1E				
	PC	647+35.750	698807.328	578563.937			S53 24 27.1E				
75-2	PI	647+85.753	698777.521	578604.084	695595.745	576179.459	1 25 56.6	100.000	50.003	4000.000	1 25 56.6
	PT	648+35.750	698746.719	578643.473			S51 58 30.5E				
	PC	648+35.750	698746.719	578643.473			S51 58 30.5E				
75-3	PI	648+85.750	698715.919	578682.860	690869.285	572483.438	0 34 22.6	100.000	50.000	10000.000	0 34 22.6
	PT	649+35.750	698684.726	578721.938			S51 24 07.8E				
	PDT	651+35.750	698559.956	578878.247			S51 24 07.8E				

RELOCATED RAMP TE BASELINE

Curve No.	Pt. Type	Station	Coordinates N	Coordinates E	Curve Center Coordinates N	Curve Center Coordinates E	Delta or Tan Brg	L	T	R	Dc
	PC	23+00.000	698866.448	578436.772			S57 01 34.5E				
TE-1	PI	23+37.108	698846.252	578467.903	697040.958	577252.474	1 57 14.4	74.209	37.108	2176.000	2 37 59.1
	PT	23+74.209	698825.006	578498.327			S55 04 20.2E				
	PC	23+74.209	698825.006	578498.327			S55 04 20.2E				
TE-2	PI	24+51.485	698780.762	578561.683	697472.212	577553.631	5 21 46.1	154.438	77.275	1650.000	3 28 20.9
	PT	25+28.647	698730.791	578620.627			S49 42 34.1E				
	POT	30+00.000	698425.984	578980.163			S49 42 34.1E				

SUSSEX AVENUE CONNECTOR BASELINE

Curve No.	Pt. Type	Station	Coordinates N	Coordinates E	Curve Center Coordinates N	Curve Center Coordinates E	Delta or Tan Brg	L	T	R	Dc
	POT	30+00.000	698425.984	578980.163			S49 42 34.1E				
	PC	30+81.349	698373.378	579042.214			S49 42 34.1E				
SC-1	PI	32+09.921	698290.236	579140.286	698251.334	578938.748	77 34 08.8	216.614	128.572	160.000	35 48 35.5
	PT	32+97.963	698176.565	579080.203			S27 51 34.7W				
	POT	35+47.742	697955.737	578963.480			S27 51 34.7W				

RAMP TWF BASELINE

Curve No.	Pt. Type	Station	Coordinates N	Coordinates E	Curve Center Coordinates N	Curve Center Coordinates E	Delta or Tan Brg	L	T	R	Dc
	POT	50+00.000	698487.871	579012.875			N53 19 00.0W				
	PC	55+47.378	698814.870	578573.905			N53 19 00.0W				
TWF-1	PI	56+67.769	698886.790	578477.358	697040.958	577252.474	6 13 50.2	240.543	120.390	2212.000	2 35 24.8
	PT	57+87.922	698947.807	578373.575			N59 32 50.2W				

RAMP TW BASELINE

Curve No.	Pt. Type	Station	Coordinates N	Coordinates E	Curve Center Coordinates N	Curve Center Coordinates E	Delta or Tan Brg	L	T	R	Dc
	PC	40+00.000	698853.508	578871.441			S47 09 30.3W				
TW-1	PI	40+89.678	698792.529	578805.686	699011.887	578724.566	45 05 38.0	170.000	89.678	216.000	26 31 33.0
	PT	41+70.000	698796.054	578716.077			N87 44 51.6W				
	PC	41+70.000	698796.054	578716.077			N87 44 51.6W				
TW-2	PI	42+11.245	698797.674	578674.865	698945.938	578721.973	30 44 55.0	80.500	41.245	150.000	38 11 49.9
	PT	42+50.500	698820.138	578640.275			N56 59 56.6W				
	POT	44+45.360	698926.269	578476.853			N56 59 56.6W				

FIRST STREET BASELINE

Curve No.	Pt. Type	Station	Coordinates N	Coordinates E	Curve Center Coordinates N	Curve Center Coordinates E	Delta or Tan Brg	L	T	R	Dc
	POT	5+50.000	698823.827	579190.452			S27 51 34.7W				
	POT	10+00.000	698425.984	578980.163			S27 51 34.7W				
	POT	15+48.191	697941.331	578723.989			S27 51 34.7W				
	POT	16+98.275	697806.380	578658.314			S25 57 01.7W				

SUSSEX AVENUE BASELINE

Curve No.	Pt. Type	Station	Coordinates N	Coordinates E	Curve Center Coordinates N	Curve Center Coordinates E	Delta or Tan Brg	L	T	R	Dc
	POT	18+84.996	698098.844	578677.199			S63 26 25.3E				
	POT	22+84.996	697919.992	579034.986			S63 26 25.3E				

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Dipento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
FIRST ST	LOU			DEC '97

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

T-2 / T-2

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TIES

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis K. Robbins 1/27/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: _____

18

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STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	19	

30' 15' 0 30' 60'
SCALE IN FEET

N.J. PLANE COORDINATE SYSTEM

E 578550
N 697950

E 578850
N 697800

AP
STA. 16+98.28
MEET EXISTING PAVEMENT
CURB, AND SIDEWALK

AP
STA. 15+48.19

T.G. 128.22

T.G. 128.37

T.G. 128.56

MEET EXISTING PAVEMENT
AND CURB (SUSSEX AVE. ℄
STA. 19+40)

RIM 128.93

FIRST STREET ℄ STA. 14+28.91=
SUSSEX AVE. ℄ STA. 20+00.00

PROPOSED ℄

FIRST STREET

S25° 57' 01.7"W

S27° 51' 34.7"W

RIM. 129.70

RIM 128.42

T.G. 127.85

MEET EXISTING
CURB. (SUSSEX AVE. ℄
STA. 20+60, 40'+-RT.)

RIM 125.01

SUSSEX AVE. ℄ STA. 22+05.05=
SUSSEX AVE. CONNECTOR ℄
STA. = 35+47.74

RIM. 123.88

MEET EXISTING PAVEMENT
AND SIDEWALK
SUSSEX AVE. ℄ STA. 22+60

SUSSEX AVENUE

SUSSEX AVE.
CONNECTOR

RIM. 127.84

T.G. 124.08

MATCH LINE FIRST STREET ℄ STA. 13+00 SHEET G-2

MATCH LINE
SUSSEX AVE. CONNECTOR ℄
STA. 34+20 SHEET G-2

G-1
G-3

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Lento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE

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31 MAR 97
13:19:00

SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

GRADES

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis Robbins
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

19

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	20	

SCALE IN FEET 30' 15' 0 30' 60'

MATCH LINE RELOC. RAMP-TE ℄ STA. 28+00 SHEET G-3

RELOCATED RAMP-TE ℄ T.G. 127.42

POT EXISTING RTE 75 STA. 651+35.75

RAMP-TE ℄

RELOCATED

RAMP-TWF ℄

T.G. 127.86
T.G. 127.89
T.G. 126.04
T.G. 126.34
T.G. 125.70
T.G. 125.13
T.G. 126.26
T.G. 126.10
T.G. 125.60
T.G. 124.87
T.G. 124.75
T.G. 126.04
T.G. 126.52
T.G. 127.12

RIM 124.36
T.G. 124.10
T.G. 123.00
RIM 124.35
T.G. 124.62
T.G. 124.52
RIM 124.87
MEET EXISTING PAVEMENT AND CURB

E 579000 N 698850

N.J. PLANE COORDINATE SYSTEM

RIM 127.38

FIRST STREET

S27° 51'34. 7"W

MATCH LINE FIRST STREET ℄ STA. 13+00 SHEET G-1

RIM 126.14
RIM 126.66
T.G. 126.94
T.G. 126.47
T.G. 125.74
T.G. 120.24

IP FIRST STREET ℄ STA. 9+30.00=
RAMP-TWF ℄ STA. 50+00.00

RIM 125.87

FIRST STREET ℄ STA. 10+00.00=
RELOC. RAMP-TE ℄ STA. 30+00.00=
SUSSEX AVE. CONN. ℄ STA. 30+00.00

PC SUSSEX AVE. CONN. ℄ STA. 30+81.35

RIM 125.29
RIM 125.10
T.G. 124.50
T.G. 123.80

E 579300 N 698550

MATCH LINE CONNECTOR SUSSEX AVE. STA. 34+20 SHEET G-1

SUSSEX AVE. CONNECTOR

PT SUSSEX AVE. CONN. ℄ STA. 32+97.96

T.G. 120.42

E 579150 N 698100

G-2

NEW JERSEY DEPARTMENT OF TRANSPORTATION

GRADES

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.

Louis Robbins 1/29/98

LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

20

SUBMITTED BY: Paul J. Scagnelli 1/30/98

PAUL J. SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Thomas J. Hicks

THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael DiPento

MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

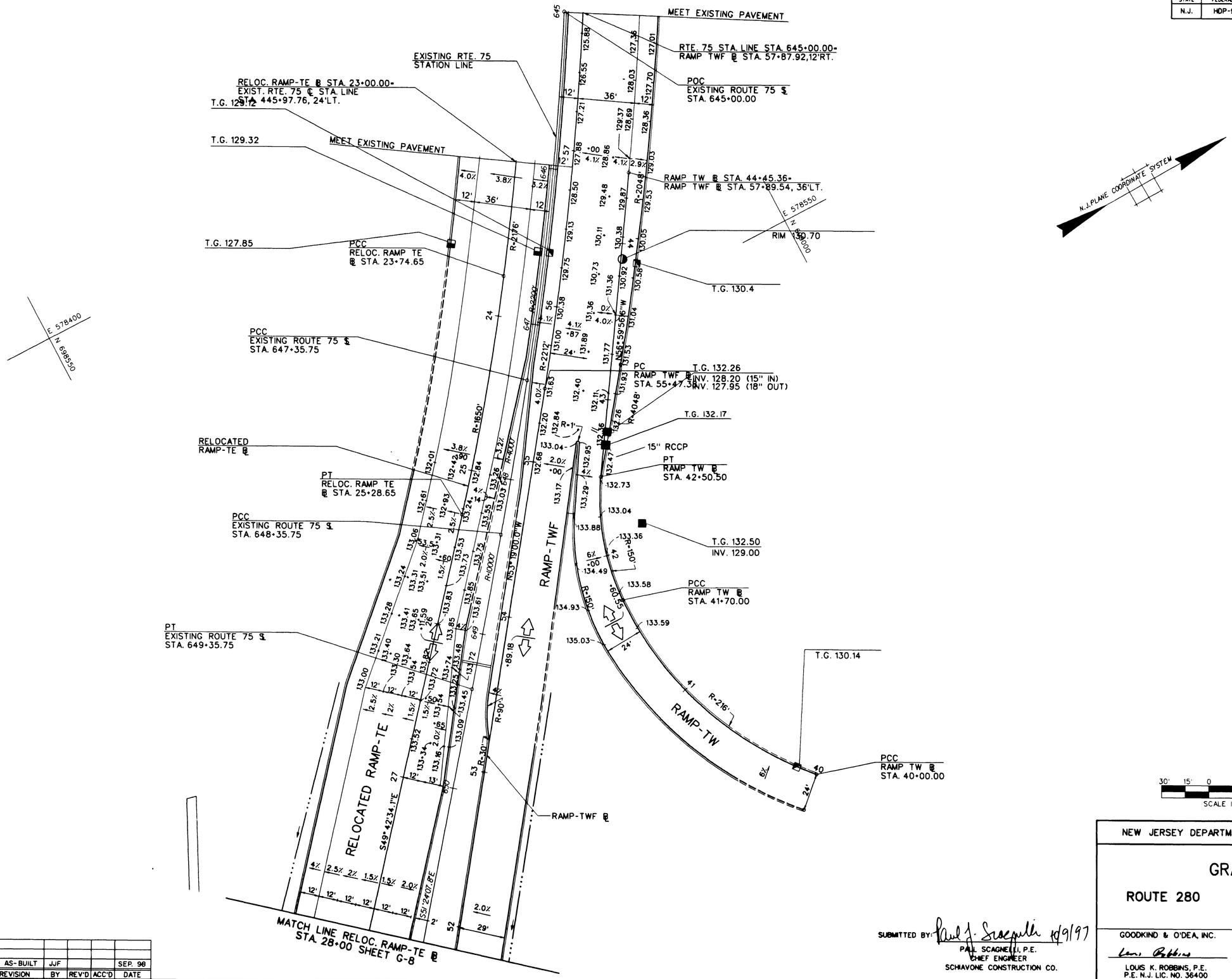
REVISION	BY	REV'D	ACC'D	DATE

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	21	



G-3
G-3

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of ____
Designed by ____
Design Checked by ____
Detailed by ____
Detail Checked by ____

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP. 98

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SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

GRADES

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis Robbins
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

21

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	22	

30' 15' 0 30' 60'
SCALE IN FEET

N.J. PLANE COORDINATE SYSTEM

LEGEND:

HIGHWAY LIGHTING PROPOSED FACILITIES:

- LIGHTING STANDARD ASSEMBLY TYPE L-15-S-40 OR L-8-S-40 WITH 250W HPS CUTOFF LUMINAIRE.
- JUNCTION BOX FOUNDATION
- LIGHTING STANDARD ASSEMBLY TYPE L-15-VERTICAL
- CONDUIT (SIZE AND TYPE AS NOTED)

HIGHWAY LIGHTING EXISTING FACILITIES:

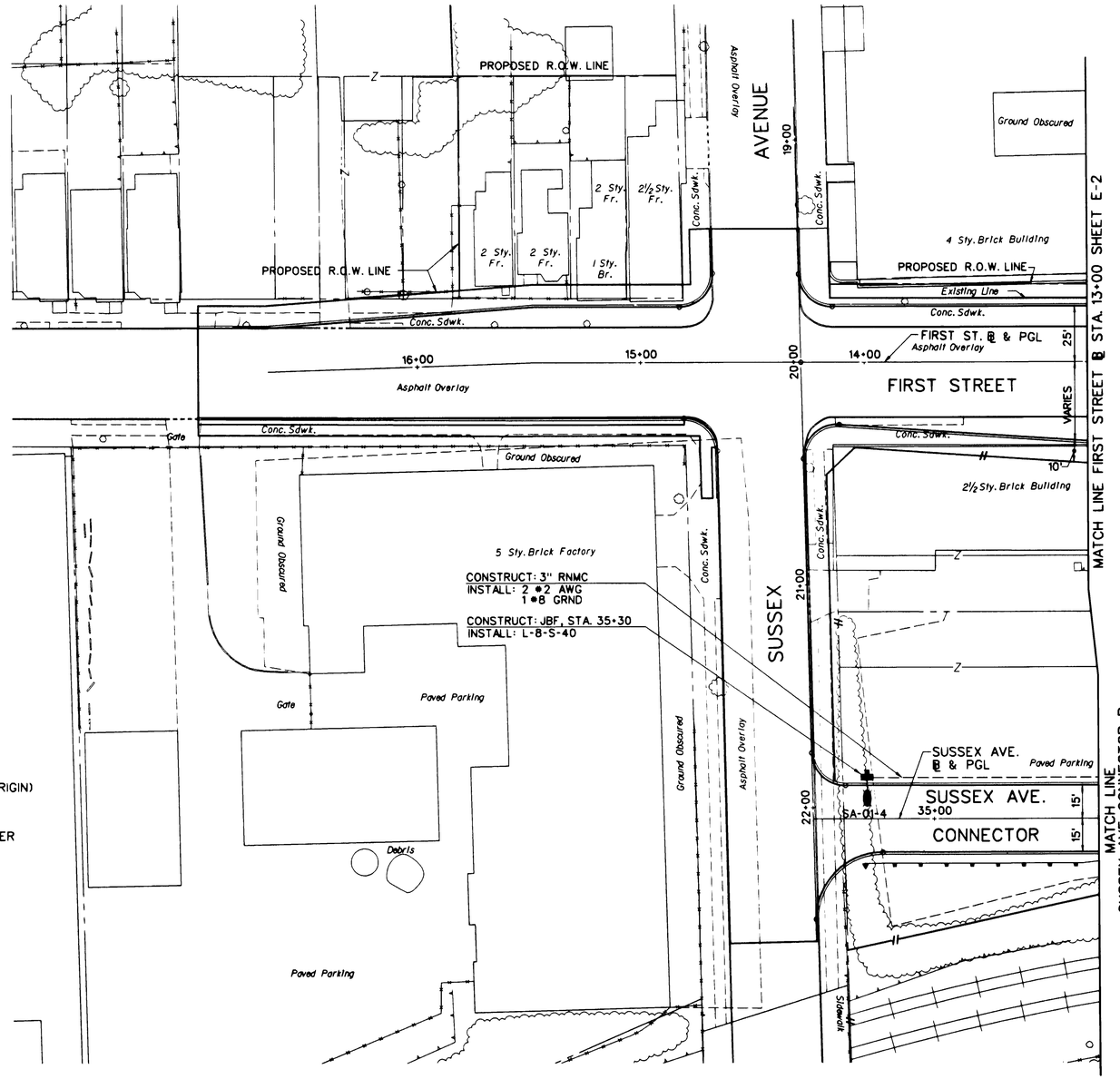
- LIGHTING STANDARD ASSEMBLY TYPE L-15 WITH CONVENTIONAL TYPE LUMINAIRE TO BE REMOVED.
- LIGHTING STANDARD ASSEMBLY TYPE L-8 WITH CONVENTIONAL TYPE LUMINAIRE TO BE REMOVED.
- JUNCTION BOX FOUNDATION
- 18" X 36" JUNCTION BOX
- UNDERDECK LIGHTING ASSEMBLY, TYPE ULA-R
- METER CABINET, TYPE 2ML, 120/208V, 3 PHASE

HIGHWAY LIGHTING TYPICAL NOTATIONS:

CONSTRUCT: JBF, STA.29+25
INSTALL: L-15-S-40
— PROPOSED JUNCTION BOX FOUNDATION LOCATION
— PROPOSED LIGHTING STANDARD ASSEMBLY TYPE

— EXISTING JUNCTION BOX FOUNDATION LOCATION

JBF, STA. 8+30
L-15 (H-4 AB-319)
— EXISTING LIGHTING STANDARD ASSEMBLY IDENTIFICATION:
H-LOAD CENTER (CIRCUIT ORIGIN)
4-CIRCUIT NUMBER
AB-PHASE CONNECTION
319-LIGHTING STANDARD NUMBER
— EXISTING LIGHTING STANDARD ASSEMBLY TYPE.



GENERAL NOTES:

1. ALL JUNCTION BOX FOUNDATIONS AND JUNCTION BOXES SHALL BE SET AT LOCATIONS DESIGNATED BY STATIONING, UNLESS OTHERWISE COORDINATED AND APPROVED BY THE ENGINEER.
2. 18"X36" JUNCTION BOXES SHALL BE SET 3'-0" FROM CENTERLINE OF BOX TO PROPOSED FACE OF CURB OR EDGE OF SHOULDER, UNLESS OTHERWISE APPROVED.
3. JUNCTION BOX FOUNDATIONS SHALL BE INSTALLED AS SHOWN ON NJDOT STANDARD DRAWING NO.L-0492. IN THE VICINITY OF GUIDERAIL, THE FRONT OF THE PROPOSED LIGHTING STANDARD SHALL BE A MINIMUM OF 9" FROM THE BACK OF THE BEAM GUIDE RAIL POST. ADDITIONALLY, LIGHTING STANDARDS SHALL NOT BE INSTALLED BEHIND SLOTTED GUIDE RAIL TERMINALS OR IN SIDEWALK AREAS.
4. NO. 2 AWG WIRE SHALL BE FURNISHED AND INSTALLED FOR LIGHTING CIRCUITS. A BARE NO.8 AWG GROUND WIRE SHALL BE FURNISHED AND INSTALLED THROUGH ALL ACTIVE NON-METALLIC AND BRIDGE (OR STRUCTURE) METALLIC CONDUIT RUNS.
5. UTILITY LIGHTING ON FIRST STREET WILL BE PROVIDED BY PSE&G.
6. CONDUIT FILL SHALL NOT EXCEED 40%.

E-1
E-8

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE

SUBMITTED BY: Paul J. Scagnelli 10/6/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL PLANS

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis Robbins
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

22

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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24 JUL 97
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STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	23	

30' 15' 0 30' 60'
SCALE IN FEET

MATCH LINE RELOC. RAMP-TE & STA. 28+00 SHEET E-3

N.J. PLANE COORDINATE SYSTEM

MATCH LINE FIRST STREET & STA. 13+00 SHEET E-1

MATCH LINE SUSSEX AVE. CONNECTOR & STA. 34+20 SHEET E-1

REMOVE: JBF, STA. 28+00
REMOVE: L-15 (H-4BC-213)

CONSTRUCT: 3" RNMC
INSTALL: 2 #2 AWG
1 #8 AWG GRND

CONSTRUCT: JBF, STA. 29+25
INSTALL: L-15-S-40

REMOVE: JBF, STA. 10+50
REMOVE: L-15 (H-4AC-214)

REMOVE: JBF, STA. 10+25
REMOVE: L-15

C-04-94R

RELOCATED RAMP-TE & PGL

RAMP TWF & PGL

RAMP-TWF

RELOCATED

29+00

51+00

4 Sty. Brick Building

Asphalt

Parking Lot

Vault

Asphalt Overlay

Asphalt Pavement

Paved Parking

Brush

GROUND OBSCURED

Concrete Sdwk.

VW

Steel Bridge

STREET

FIRST STREET

12+00

11+00

10+00

9+00

8+00

7+00

6+00

FIRST ST. & PGL

FIRST STREET

SEE ELECTRICAL PLAN SHEET E-6

VARIES

79053

79047

Concrete Sdwk.

Brick Wall

CONSTRUCT: 3" RNMC
INSTALL: 2 #2 AWG
1 #8 GRND

CONSTRUCT: JBF, STA. 30+85
INSTALL: L-8-S-40

SA-01-1

31+00

CONSTRUCT: 3" RNMC
INSTALL: 2 #2 AWG
1 #8 GRND

2½ Sty. Brick Building

1½ Sty. Brick Building

1 Sty. Brick Garage

2 Sty. Brick High Volt Bldg.

Concrete

METER CABINET, TYPE 2ML

CONSTRUCT: 3" RNMC
INSTALL: 2 #2 AWG
1 #8 GRND

CONSTRUCT: JBF, STA. 33+55
INSTALL: L-8-S-40

CONSTRUCT: JBF, STA. 32+00
INSTALL: L-8-S-40

SA-01-2

32+00

E & PGL

5 Sty. Brick Factory

SUSSEX AVE.

34+00

SA-01-3

33+00

CONNECTOR

Dirt Piles

Concrete

RR

GROUND OBSCURED

ORANGE

ROUTE 280 E.B.

ROUTE 280 W.B.

CKT1
20 AMP

1 2 3 4

FIRST ST./RAMP-TE
TRAFFIC SIGNAL LOAD CENTER
LIGHTING LOAD CENTER SA

E-2

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE

SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL PLANS

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

23

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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29 JUL 97
14 27 01

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	24	

30' 15' 0 30' 60'
SCALE IN FEET

STA. 22+50 SHEET E-4
MATCH LINE RELOC. RAMP-TE ℄

N.J. PLANE COORDINATE SYSTEM

CONSTRUCT: 3" RNMC
INSTALL: 2#2 AWG
1#8 GRND

EXISTING LIGHT
TO REMAIN

CONSTRUCT: JBF, STA. 24+00
INSTALL: L-15-S-T-VERTICAL

REMOVE: JBF, STA. 22+60
REMOVE: L-15

EXISTING LIGHT
TO REMAIN

REMOVE: JBF, STA. 24+10
REMOVE: L-15

~~EXISTING JBF TO REMAIN~~
~~REMOVE EXISTING L-8~~

~~EXISTING LIGHT~~
~~TO REMAIN~~
DELETED

CONSTRUCT: JBF, STA. 25+75
INSTALL: L-15-S-40

CONSTRUCT: 3" RNMC
INSTALL: 2#2 AWG
1#8 GRND

CONSTRUCT: JBF, STA. 27+20
INSTALL: L-15-S-40

CONSTRUCT: 3" RNMC
INSTALL: 3#2 AWG
1#8 GRND

CONSTRUCT: 3" RNMC
INSTALL: 2#2 AWG
1#8 GRND

SPLICED AT JB

EXISTING JBF

ROUTE 280 EB

RAMP-TWF

RAMP-TW

RELOCATED RAMP-TE

Asphalt Shoulder
Concrete Pavement
Asphalt Overlay
Asphalt Pavement
Concrete
Abandoned Roadway
Brush
Vault
Signal Bridge
Concrete Sidewalk
GROUND OBSCURED

G-09-88
G-09-89V
G-09-01V
G-09-87
G-09-97
G-09-100
G-09-101
G-04-92R
G-04-93R

24+00
25+00
26+00
27+00
35+00
42+00
53+00
54+00
56+00
650'-00
48'
26'
29'
32+00

MATCH LINE RELOC. RAMP-TE ℄
STA. 28+00 SHEET E-2

ORANGE STREET
SECOND STREET

CKT.2
ØA
ØB
ØC
53 55 56 58 59 ~~96~~ ~~97~~ ~~94~~ ~~95~~ ~~96~~ 93R
54 57 ~~92~~ ~~93~~ 92R
94R

CIRCUIT 4
LOAD CENTER G LOCATED
AT RT. 280 E.B.
COLLECTOR RD
AND 7TH STREET.

LEGEND:
~~XX~~ REMOVED

E-3

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL PLANS

ROUTE 280 SECTION 7AA

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38783

ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

GOODKIND & O'DEA, INC.
Louis Robbins
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

24

REVISION	BY	REV'D	ACC'D	DATE
AS BUILT	JJF			SEP 98

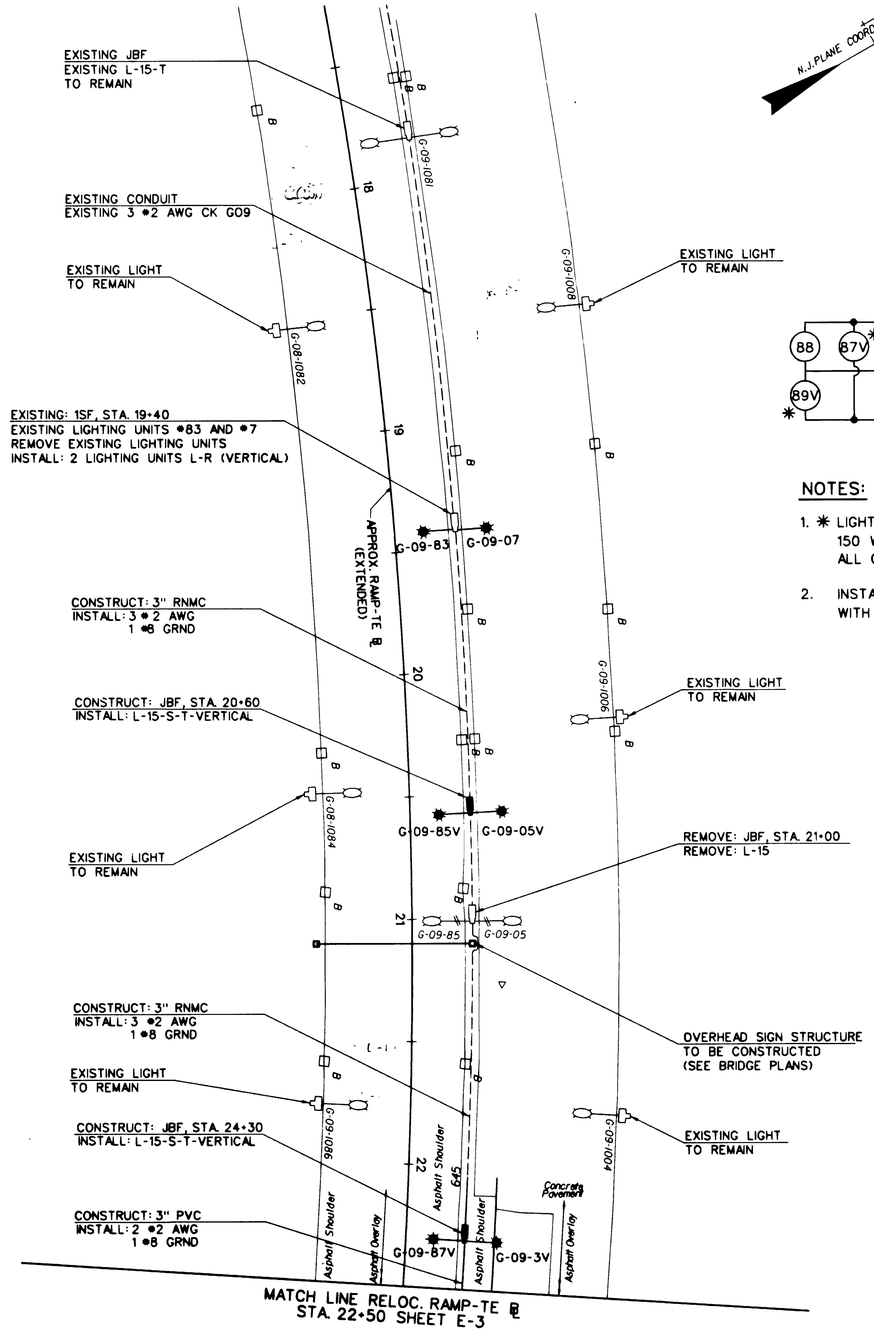
Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

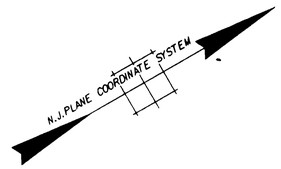
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Design Checked by
Detailed by
Detail Checked by

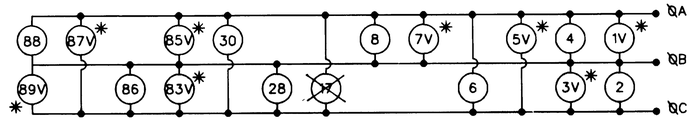
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29 JUL 97
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STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	25	

30' 15' 0 30' 60'
SCALE IN FEET







CIRCUIT 9
LOAD CENTER G LOCATED
AT RT. 280 E.B.
COLLECTOR RD
AND 7TH STREET.

NOTES:

1. * LIGHTS: 1V, 3V, 5V, 7V, 89V, 83V, 85V AND 87V ARE NEW 150 WATT VERTICAL UNITS.
   ALL OTHERS LIGHTS ON THIS CIRCUIT ARE EXISTING.
2. INSTALL VERTICAL LIGHTING UNITS IN ACCORDANCE WITH NJDOT SPECIFICATION EB L-HPS-6.

E-4

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP. '98

SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL PLANS

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis Robbins
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

25

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29 JUL 97
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STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	26	

MAST ARM SIGNS

5" (TYP.)
8" U.C./6" L.C. (TYP.)
5" (TYP.)

Sussex Ave ~~100~~

4" (TYP.)
5" U.C./3.75" L.C. (TYP.)
1.5" (TYP.)
2.5" (TYP.)
5" (TYP.)

D-1 250
D-2 274
D-3 275

(SIGN D)
60" X 18" MAST ARM SIGN

Sussex Ave Conn

(SIGN E)
90" X 18" MAST ARM SIGN

First St ~~100~~ 107

(SIGN F)
48" X 18" MAST ARM SIGN

N.J. PLANE COORDINATE SYSTEM

ONLY | ONLY
R(NJ)3-8v
30"X30"
(SIGN Ⓐ)

R3-1
24"X24"
(SIGN Ⓑ)

R3-2
24"X24"
(SIGN Ⓒ)

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIRS, 1/C #14

CONSTRUCT: 17" x 30" JUNCTION BOX
STA. 15+10, 27' LT

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: CABLES: 2-2/C #14

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIRS, 1/C #14

CONSTRUCT: 17" x 30" JUNCTION BOX
STA. 14+~~82~~ 85, 29' LT

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: CABLES: 4-2/C #14

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: A-10/C, B-5/C, C-5/C, D-2/C

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIRS, 1/C #14

CONSTRUCT: 17" x 30" JUNCTION BOX
STA. 19+40, 46' RT

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2-2/C # 14

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIRS, 1/C # 14

CONSTRUCT: ~~42" x 36"~~ 18" x 36" JUNCTION BOX
STA. 19+60, 46' RT

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: J-10/C, K-5/C, L-5/C, M-5/C, N-2/C

CONSTRUCT: SFT, STA. 14+79, 37'RT.
INSTALL: TSS, TYPE T
TSA, TYPE 25TA-2
TSA, TYPE MM-1
(2) PSA, TYPE W-1
PBA, R10-4

CONSTRUCT: SFT, STA. 14+73, 35'LT.
INSTALL: TSS, TYPE T
TSA, TYPE 20TA-2
(2) PSA, TYPE W-1
PBA, R10-4b

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 20+45, 48' RT.

CONSTRUCT: 3" RMC, TYPE CUR
INSTALL: CABLES: A-10/C, B-5/C, C-5/C, D-2/C, 4-2/C #14

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIRS, 1/C #14

CONSTRUCT:(2) 3" RMC, TYPE CUG
INSTALL: CABLES: S-5/C, T-5/C, U-2/C, V-10/C, W-5/C, X-5/C, Y-2/C, Z-10/C, AA-10/C, BB-5/C, CC-2/C, 11-2/C #14

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: W-5/C, X-5/C, Y-2/C,

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 21-~~82~~ 70, 7'LT.

CONSTRUCT: SPF, STA. 21+74, 42'RT.
INSTALL: PSA, TYPE PW-1
PBA, R10-4b

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: BB-5/C, CC-2/C

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 21+81, 48' RT.

CONSTRUCT: 3" RMC, TYPE CUR
INSTALL: CABLES: Z-10/C, AA-10/C, BB-5/C, CC-2/C

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: Z-10/C, AA-10/C

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 22+26, 48' RT.

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: Z-10/C, AA-10/C

CONSTRUCT: SFT, STA. 22+26, 42'RT.
INSTALL: TSS, TYPE T
TSA, TYPE 15TA-2
TSA, TYPE 25TA-2

CONSTRUCT: 3" RMC TYPE CUR
INSTALL: CABLES: S-5/C, T-5/C, U-2/C, 3-2/C #14

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 35+44, 36' LT.

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: S-5/C, T-5/C, U-2/C

CONSTRUCT: 3" RMC, TYPE CUR
INSTALL: CABLES: J-10/C, K-5/C, L-5/C, M-5/C, N-2/C, 4-2/C #14

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIRS, 1/C #14

CONSTRUCT: SFT, STA. 19+63, 3'LT.
INSTALL: TSS, TYPE T
TSA, TYPE 20TA-2
(2) PSA, TYPE W-1
PBA, R10-4b

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: CABLES: 2-2/C #14

CONSTRUCT: 17" x 30" JUNCTION BOX
STA. 13+82, 27' RT

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIRS, 1/C #14

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: O-10/C, P-5/C, Q-5/C, R-2/C

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 14+06, 31' RT.

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 14+13, 33' LT.

CONSTRUCT: 3" RMC, TYPE CUR
INSTALL: CABLES: J-10/C, K-5/C, L-5/C, M-5/C, N-2/C, O-10/C, P-5/C, Q-5/C, R-2/C, 8-2/C #14

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: E-10/C, F-5/C, G-5/C, H-5/C, I-2/C PVC

CONSTRUCT: SERVICE, 2" ~~RMC~~ TYPE CUG
INSTALL: 3-1/C #6

CONSTRUCT: FOUNDATION TYPE FT-T
INSTALL: 170E TRAFFIC CONTROLLER, METER CABINET, MODEL 332

CONSTRUCT: (3)3" RMC, TYPE CUG
INSTALL: CABLES: A-10/C, B-5/C, C-5/C, D-2/C, E-10/C, F-5/C, G-5/C, H-5/C, I-2/C, J-10/C, K-5/C, L-5/C, M-5/C, N-2/C, O-10/C, P-5/C, Q-5/C, R-2/C, S-5/C, T-5/C, U-2/C, V-10/C, W-5/C, X-5/C, Y-2/C, Z-10/C, AA-10/C, BB-5/C, CC-2/C, 25-2/C# 14, 1-18/C # 18

CONSTRUCT: SFT, STA. 14+15, 41'LT.
INSTALL: TSS, TYPE T
TSA, TYPE 25TA-2
TSA, TYPE MM-1
(2) PSA, TYPE W-1
PBA, R10-4b

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 1-18/C # 18 (INTERCONNECT)

CONSTRUCT: (2)3" RMC, TYPE CUG
INSTALL: CABLES: A-10/C, B-5/C, C-5/C, D-2/C, S-5/C, T-5/C, U-2/C, V-10/C, W-5/C, X-5/C, Y-2/C, Z-10/C, AA-10/C, BB-5/C, CC-2/C, 17-2/C #14

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 20+45, 8' LT.

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 20+62, 8' LT.

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIR, 1/C #14

CONSTRUCT:(2) 3" RMC, TYPE CUG
INSTALL: CABLES: S-5/C, T-5/C, U-2/C, V-10/C, W-5/C, X-5/C, Y-2/C, Z-10/C, AA-10/C, BB-5/C, CC-2/C, 9-2/C #14

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 4-2/C #14

CONSTRUCT: 17" x 30" JUNCTION BOX
STA. 35+18, 20' RT.

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 4 PAIRS, 1/C # 14

CONSTRUCT: SFT, STA. 21+80, 11'LT.
INSTALL: TSS, TYPE T
TSA, TYPE 20TA-2
(2) PSA, TYPE W-1
PBA, R10-4b

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIRS, 1/C # 14

CONSTRUCT: SPF, STA. 35+38, 30'LT.
INSTALL: PA, TYPE P-1-W-1-D-12
PBA, R10-4b

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 3 PAIRS, 1/C #14

PROP. FIRST ST. ℄
FIRST STREET
PROP. SUSSEX AVE. ℄
SUSSEX AVE.
PROP. SUSSEX AVE. CONNECTOR ℄
CONNECTOR
MATCH LINE FIRST STREET ℄ STA. 12+75 SHEET E-5

SCALE IN FEET 20 10 0 20 40

LOOP DETECTOR SCHEDULE

SENSOR NO.	SENSOR CHANNEL	LOOP	MODE	SIZE	TYPE	NO. OF TURNS	μh
1	1	A	PRESENCE	6' x 14'	T	5	215
1	2	B	PRESENCE	6' x 14'	T	5	215
1	3	C	PRESENCE	6' x 14'	T	5	215
1	4	D	PRESENCE	6' x 14'	T	5	215
2	1	E	PRESENCE	6' x 14'	T	5	215
2	2	F	PRESENCE	6' x 14'	T	5	215
2	3	G	PRESENCE	6' x 14'	T	5	215
2	4	H	PRESENCE	6' x 14'	T	5	215
3	1	I	PRESENCE	6' x 10'	T	5	210
3	2	J	PRESENCE	6' x 10'	T	5	210
3	3	K	PRESENCE	6' x 10'	T	5	210
4	1	L	PRESENCE	6' x 10'	T	5	210
4	2	M	PRESENCE	6' x 10'	T	5	210
5	1	N	PRESENCE	6' x 10'	T	5	210
5	2	O	PRESENCE	6' x 10'	T	5	210
5	3	P	PRESENCE	6' x 10'	T	5	210
5	4	Q	PRESENCE	6' x 10'	T	5	210
6	1	R	PRESENCE	6' x 18'	T	4	205
6	2	S	PRESENCE	6' x 18'	T	4	205
6	3	T	PRESENCE	6' x 18'	T	4	205
6	4	U	PRESENCE	6' x 18'	T	4	205
7	1	V	PRESENCE	6' x 18'	T	4	205
7	2	W	PRESENCE	6' x 18'	T	4	205
7	3	X	PRESENCE	6' x 18'	T	4	205
7	4	Y	PRESENCE	6' x 18'	T	4	205

NUMBER OF TURNS DETERMINED IN FIELD.

SIGNAL FACE LEGEND

(FIRST STREET/ SUSSEX AVENUE)

8" 8" 8" (R Y G) 8"
NO. 1,2,3,4,5,6,7,8,9,10

16" INCANDESCENT
NO. 11,12,13,14,15,16,17,18

(SUSSEX AVENUE CONNECTOR/ SUSSEX AVENUE)

8" 8" 8" (R Y G) 8"
NO. 20,21

8" 8" 8" (R Y G) 8"
NO. 22,23,24,25

12" (R) 12" (Y) 12" (G)
NO. 19

16" INCANDESCENT
NO. 26,27,28,29

NOTE: SIGNAL HEAD NO. 19 TO BE MOUNTED AT 12 FEET.

BLOCK WIRING DIAGRAM

8 A-10/C
9
12 B-5/C
17 C-5/C
PBA D-2/C
2 E-10/C
4
3 F-5/C
13 G-5/C
18 H-5/C
PBA I-2/C
1 J-10/C
5
6 K-5/C
11 L-5/C
16 M-5/C
PBA N-2/C
7 O-10/C
10
14 P-5/C
15 Q-5/C
PBA R-2/C

S-5/C 19
T-5/C 26
U-2/C PBA
V-10/C 22
25
W-5/C 27
X-5/C 28
Y-2/C PBA
Z-10/C 20
21
AA-10/C 23
24
BB-5/C 29
CC-2/C PBA

CONTROLLER

2/C #14 TWISTED PAIRS
A C E G I K M O Q S U W Y
B D F H J L N P R T V X

E-5

NOTE :
LOOPS R,S,T,U,V,W,X,Y SHALL NOT BE MADE OPERATIONAL AT THIS TIME.

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Dipento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP. 98
FIRST ST	LOU			DEC., 97

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL PLANS
FIRST ST. ℄ STATION 12+25
TO STATION 16+98.28
ROUTE 280 SECTION 7AA
FIRST STREET AND SUSSEX AVENUE
SUSSEX AVENUE CONNECTOR AND SUSSEX AVENUE

GOODKIND & O'DEA, INC.
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400
1/29/98

SCALE: 1"=20'

26

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	27	

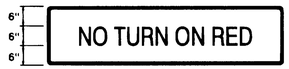
MAST ARM SIGNS



(SIGN A)
48" X 18" MAST ARM SIGN



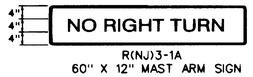
(SIGN B)
48" X 18" MAST ARM SIGN
(20" X 16" SHIELD)



(SIGN C)
R(NJ) 10-11F
72" X 18" MAST ARM SIGN



R(NJ)3-3
60" X 12" MAST ARM SIGN



R(NJ)3-1A
60" X 12" MAST ARM SIGN

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 6-2/C #14

CONSTRUCT: 17" x 30" JUNCTION BOX
STA. 29+15, 29'LT

CONSTRUCT: 3-1½" RMC, TYPE CUG
INSTALL: 6 PAIRS, 1/C #14

CONSTRUCT: 3-1½" RMC, TYPE CUG
INSTALL: 6 PAIRS, 1/C #14

CONSTRUCT: 17" x 30" JUNCTION BOX
STA. 29+19, 50'RT

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: 6-2/C #14

CONSTRUCT: 2-1½" RMC, TYPE CUG
INSTALL: 4 PAIRS 1/C #14

CONSTRUCT: SFT, STA. 29+40, 56'RT.
INSTALL: TSS, TYPE T
PSA, TYPE W-1
TSA, TYPE C-1
PBA, R10-4b
PEDESTRIAN MOTION DETECTOR

CONSTRUCT: 17" x 30" JUNCTION BOX
STA. 29+46, 54'RT

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: 10-2/C #14

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: A-10/C, B-5/C, C-2/C, 1-4/C #14

CONSTRUCT: 2-1½" RMC, TYPE CUG
INSTALL: 3 PAIRS 1/C #14

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 10+54, 54'RT

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: D-10/C

CONSTRUCT: STF, STA. 10+71, 46'RT.
INSTALL: TSS, TYPE S
TSA, TYPE 35S-1
TSA, TYPE MM-1

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: A-10/C, B-5/C, C-2/C, D-10/C
1-4/C #14, 13-2/C #14

CONSTRUCT: SPF, STA. 29+42, 33.5'L
INSTALL: PA, TYPE P-1-W-1

SCALE IN FEET
20 10 0 20 40

N.J. PLANE COORDINATE SYSTEM

CONSTRUCT: 5-1½" RMC, TYPE CUG
INSTALL: 9 PAIRS, 1/C #14

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 29+50, 40'LT.

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: H-5/C, Y-10/C, J-2/C, O-10/C

CONSTRUCT: STF, STA. 50+44, 16'LT
INSTALL: TSS, TYPE S,
TSA, TYPE 35S-2
TSA, TYPE MM-1
1-PSA, TYPE W-1
PBA, R10-4b
R3-3

CONSTRUCT: 3" RMC, TYPE CUR
INSTALL: CABLES: G-10/C, I-5/C, O-10/C, 15-2/C #14
3" RMC TYPE CUR
CABLES: 6-2/C #14 L-10/C, M-5/C N-2/C

CONSTRUCT: 3" RMC, TYPE CUR
INSTALL: CABLES H-5/C, J-2/2, ~~L-10/C, M-5/C, N-2/C,~~ O-10/C, Y-10/C, 6-2/C #14
1-4/C #14

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 50+48, 52'RT.

CONSTRUCT: 3" RMC, TYPE CUG.
INSTALL: CABLES: L-10/C, M-5/C, N-2/C, 1-4/C #14

CONSTRUCT: SFT, STA. 50+46, 54'RT
INSTALL: TSS, TYPE T
TSA, TYPE C-1
PSA, TYPE W-1
PBA, R10-4b
PEDESTRIAN MOTION DETECTOR
R3-3

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: CABLES (2)-2/C #14
18" x 36"
CONSTRUCT: ~~42"~~ x ~~36"~~ JUNCTION BOX
STA. 8+43, 29'RT.

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: G-10/C, I-5/C,

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 29+47, 46'LT.

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: L-10/C, M-5/C, N-2/C, ~~8-2/C #14~~, 1-4/C #14

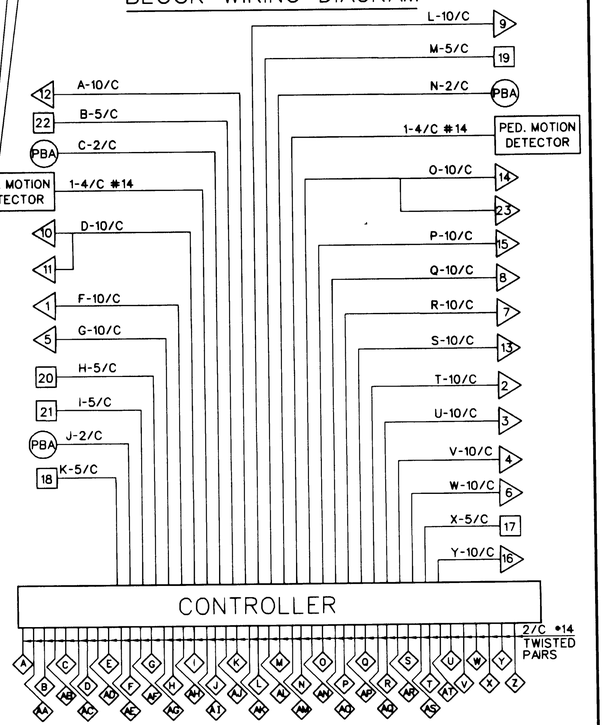
CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES (6)-2/C #14
18" x 36"
CONSTRUCT: ~~42"~~ x ~~36"~~ JUNCTION BOX
STA. 8+71, 29'RT.

CONSTRUCT: 2-1½" RMC, TYPE CUG
INSTALL: 4 PAIRS, 1/C #14

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIRS, 1/C #14

NOTE :
SEE ELECTRICAL PLAN SHEET E-8 FOR LOOP DETECTOR SCHEDULE.

BLOCK WIRING DIAGRAM



NOTE :
LOOPS AA THROUGH AN SHALL NOT BE MADE OPERATIONAL AT THIS TIME.

E-6

MATCH LINE FIRST STREET E-4 SHEET 12+75

PROP. FIRST ST. ℄

FIRST STREET

12+00 11+00

ONLY ONLY ONLY

PROP. RELOCATED RAMP-TE ℄

RELOCATED RAMP-TE

PROP. RAMP-TWF ℄

RAMP-TWF

SLOPE

R(NJ)3-3

R3-3

ONLY ONLY

9+00

PROP. FIRST ST. ℄

MATCH LINE FIRST STREET E-6 STA. 8+00 SHEET

EXTENDED CURB LINE

R(NJ)3-1A

R(NJ)3-3

SEE DETAIL "A"

2" PVC
CABLE: P-10/C

CONSTRUCT: SFT, STA. 9+00, 40' LT.
INSTALL: TSS, TYPE T
TSA, TYPE 20M-1

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 1-18/C #18 (INTERCONNECT)
~~CABLES: P-18/C~~

CONSTRUCT: P-MC, 2 SQ. YD. CONC REINFORCED, 6" THICK
INSTALL: METER CABINET, TYPE TL
CONTROLLER ASSEMBLY, 8 PHASE

CONSTRUCT: STF, STA. 9+85, ~~44.5~~ 37.5 LT.
INSTALL: TSS, TYPE S
TSA, TYPE 35S-2
TSA, TYPE MM-1
(2)TSA, TYPE C-1
PSA, TYPE W-1
TSA, TYPE 30S-1
TSA, TYPE MM-1

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 8+24, 41'LT.

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 1-18/C #18 (INTERCONNECT)

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 1-18/C #18 (INTERCONNECT)

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 12+20, 43'LT.

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 1-18/C #18 (INTERCONNECT)

CONSTRUCT: 3-1½" RMC, TYPE CUG
INSTALL: 6 PAIRS, 1/C #14

CONSTRUCT: 17" x 30" JUNCTION BOX
STA. 10+66, 38'LT.

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 6-2/C #14

CONSTRUCT: 3-1½" RMC, TYPE CUG
INSTALL: 6 PAIRS, 1/C #14

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 10+35, 44'LT.

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: K-5/C, F-10/C

CONSTRUCT: SPF, STA. 10+33, 48'LT.
INSTALL: PA, TYPE P-1-W-1

SEE ELECTRICAL PLANS SHEET E-2

CONSTRUCT: 3" RMC, TYPE CUR
INSTALL: CABLES: K-5/C, 1-18/C #18 (INTERCONNECT)
2 #2 AWG, 12-2/C #14, F-10/C

SUSSEX AVENUE CONNECTOR
31+00
PROP. SUSSEX AVE. CONNECTOR ℄

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 9+~~88~~ 75, 41'LT.

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: G-10/C, H-5/C, I-5/C, J-2/C, L-10/C, M-5/C, N-2/C, O-10/C, Y-10/C, 1-4/C #14

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 9+~~88~~ 80, 41'LT.

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: Q-10/C, R-10/C, S-10/C, T-10/C, U-10/C, V-10/C, W-10/C, X-5/C

DETAIL "A"
N.T.S.

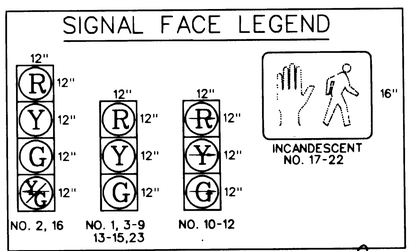
CONSTRUCT: 3-3" RMC, TYPE CUG
INSTALL: CABLES: A-10/C, B-5/C, C-2/C, D-10/C, F-10/C, K-5/C, Q-10/C, R-10/C, T-10/C, U-10/C, V-10/C, W-10/C, X-5/C, S-10/C, 25-2/C #14, 1-4/C #14, 1-18/C #18 (INTERCONNECT) 2 #2 AWG

CONSTRUCT: 2-3" RMC, TYPE CUG
INSTALL: CABLES: G-10/C, H-5/C, I-5/C, J-2/C, L-10/C, M-5/C, N-2/C, O-10/C, P-10/C, Y-10/C, 21-2/C #14, 1-4/C #14, 1-18/C #18 (INTERCONNECT)

CONSTRUCT: SERVICE: 2" ~~RMC~~ PVC, TYPE CUG
INSTALL: 3-1/C 6

LOAD CENTER SA

SIGNAL FACE LEGEND



REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

SUBMITTED BY: Paul J. Scagnelli 3/4/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP. 98
FIRST ST.	LOU			DEC. 97

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL PLANS
FIRST ST. ℄ STATION 8+00 TO STATION 12+75
ROUTE 280 SECTION 7AA
FIRST STREET AND I-280 RAMPS

GOODKIND & O'DEA, INC.
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400
3/4/98

SCALE: 1"=20'

27

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

09 MAR 98
09:36:04

STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	28	

MAST ARM SIGNS



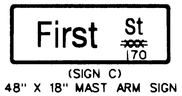
R3-2
24"X24"



SIGN B
24" X 18"
SEE TSS-2 FOR LETTER SIZE

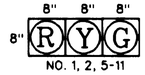


(SIGN D)
60" X 18" MAST ARM SIGN

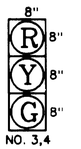


(SIGN C)
48" X 18" MAST ARM SIGN

SIGNAL FACE LEGEND



NO. 1, 2, 5-11

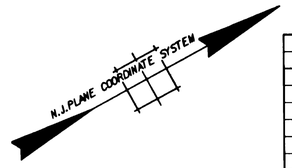


NO. 3,4



INCANDESCENT
NO. 12-19



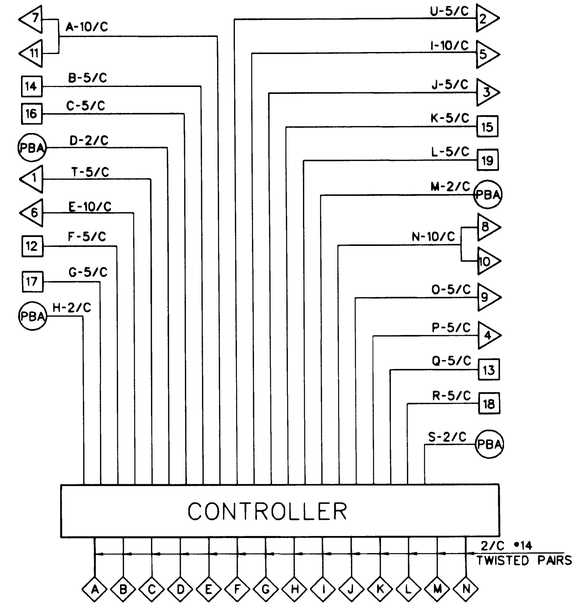


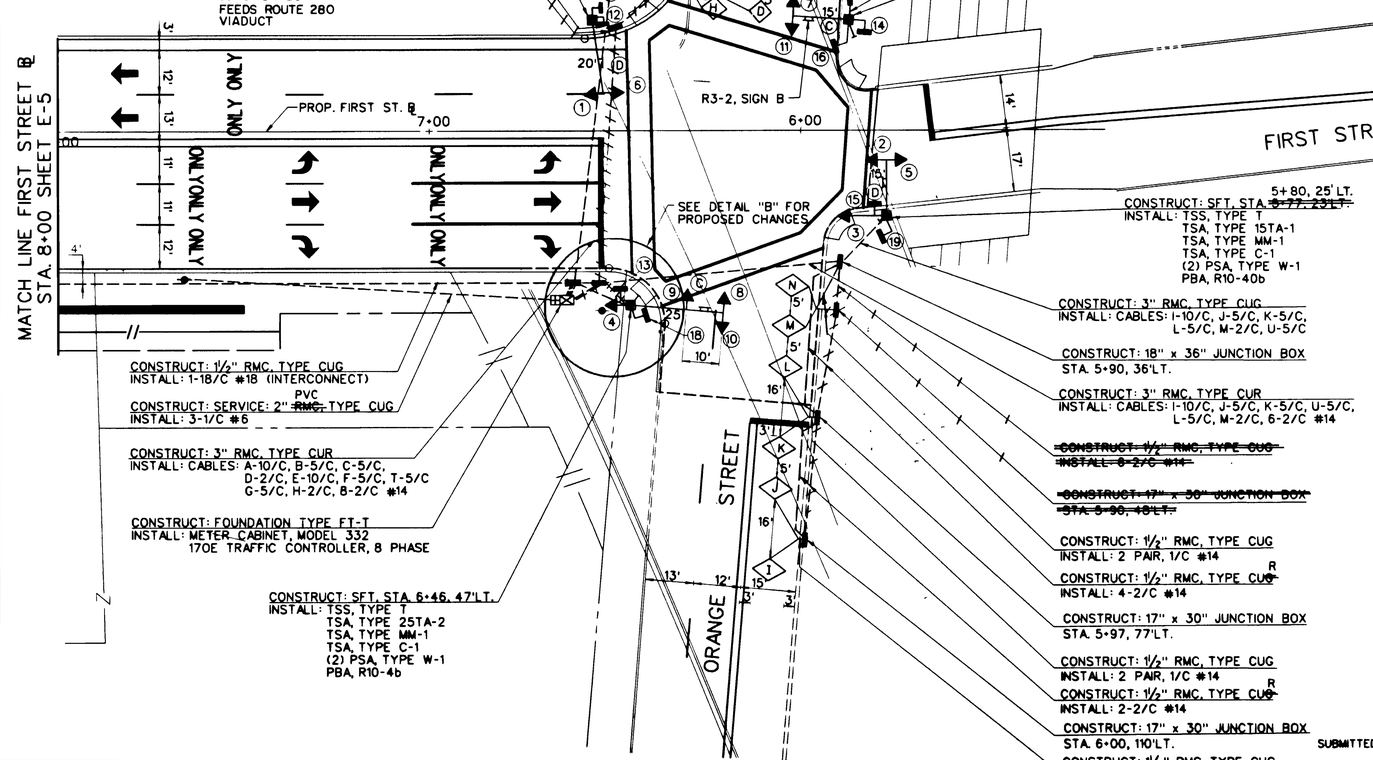
LOOP DETECTOR SCHEDULE

SENSOR NO.	SENSOR CHANNEL	LOOP	MODE	SIZE	TYPE	NO. OF TURNS	μh
1	1	A	PRESENCE	6' x 6'	T	6	225
1	2	B	PRESENCE	6' x 6'	T	6	225
1	3	C	PRESENCE	6' x 6'	T	6	225
1	4	D	PRESENCE	6' x 6'	T	6	225
2	1	E	PRESENCE	6' x 7'	T	6	215
2	2	F	PRESENCE	6' x 7'	T	6	215
2	3	G	PRESENCE	6' x 7'	T	6	215
2	4	H	PRESENCE	6' x 7'	T	6	215
3	1	I	PRESENCE	6' x 9'	T	6	210
3	2	J	PRESENCE	6' x 9'	T	6	210
3	3	K	PRESENCE	6' x 9'	T	6	210
4	1	L	PRESENCE	6' x 9'	T	6	210
4	2	M	PRESENCE	6' x 9'	T	6	210
4	3	N	PRESENCE	6' x 9'	T	6	210

NUMBER OF TURNS DETERMINED IN FIELD.

BLOCK WIRING DIAGRAM





CONSTRUCT: 2-1½" RMC, TYPE CUG
INSTALL: ~~4~~ 5 PAIR, 1/C # 14

CONSTRUCT: 17" x 30" JUNCTION BOX

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: ~~4~~ 5 2/C # 14

CONSTRUCT: 2-1½" RMC, TYPE CUG
INSTALL: ~~4~~ 3 PAIR, 1/C # 14

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 6+34, 42'RT.

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: A-10/C, B-5/C, C-5/C, D-2/C, 8-2/C #14

CONSTRUCT: SFT, STA. 6+56, 30'RT.
INSTALL: TSS, TYPE T
TSA, TYPE 20TA-2
(2) PSA, TYPE W-1
PBA, R10-4b

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: E-10/C, F-5/C, G-5/C, H-2/C, T-5/C

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 6+60, ~~30~~ 45'RT.

RESET JUNCTION BOX
STA. 7+15, 50'RT.

JUNCTION BOX
FEEDS ROUTE 280
VIADUCT

CONSTRUCT: 3" RMC, TYPE CUR
INSTALL: CABLES: A-10/C, B-5/C, C-5/C, D-2/C

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 5+87, 30'RT.

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: A-10/C, B-5/C, C-5/C, D-2/C

CONSTRUCT: SFT, STA. 5+87, 36'RT.
INSTALL: TSS, TYPE T
TSA, TYPE 15TA-2
(2) PSA, TYPE W-1
PBA, R10-4b

CONSTRUCT: SFT, STA. ~~5+77, 23'LT.~~ 5+80, 25'LT.
INSTALL: TSS, TYPE T
TSA, TYPE 15TA-1
TSA, TYPE MM-1
TSA, TYPE C-1
(2) PSA, TYPE W-1
PBA, R10-40b

CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: I-10/C, J-5/C, K-5/C, L-5/C, M-2/C, U-5/C

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 5+90, 36'LT.

CONSTRUCT: 3" RMC, TYPE CUR
INSTALL: CABLES: I-10/C, J-5/C, K-5/C, U-5/C, L-5/C, M-2/C, 6-2/C #14

~~CONSTRUCT: 1½" RMC, TYPE CUG~~
~~INSTALL: 8-2/C #14~~

~~CONSTRUCT: 17" x 30" JUNCTION BOX~~
~~STA. 5+96, 48LT.~~

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIR, 1/C #14

CONSTRUCT: 1½" RMC, TYPE ~~CUG~~ R
INSTALL: 4-2/C #14

CONSTRUCT: 17" x 30" JUNCTION BOX
STA. 5+97, 77'LT.

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIR, 1/C #14

CONSTRUCT: 1½" RMC, TYPE ~~CUG~~ R
INSTALL: 2-2/C #14

CONSTRUCT: 17" x 30" JUNCTION BOX
STA. 6+00, 110'LT.

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 2 PAIR, 1/C #14

CONSTRUCT: 1½" RMC, TYPE CUG
INSTALL: 1-18/C #18 (INTERCONNECT)

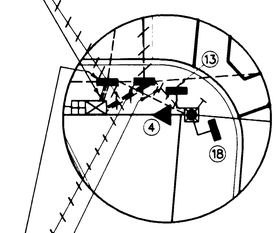
CONSTRUCT: SERVICE: 2" ~~RMC~~ PVC, TYPE CUG
INSTALL: 3-1/C #6

CONSTRUCT: 3" RMC, TYPE CUR
INSTALL: CABLES: A-10/C, B-5/C, C-5/C, D-2/C, E-10/C, F-5/C, T-5/C G-5/C, H-2/C, 8-2/C #14

CONSTRUCT: FOUNDATION TYPE FT-T
INSTALL: METER CABINET, MODEL 332
170E TRAFFIC CONTROLLER, 8 PHASE

CONSTRUCT: SFT, STA. 6+46, 47'LT.
INSTALL: TSS, TYPE T
TSA, TYPE 25TA-2
TSA, TYPE MM-1
TSA, TYPE C-1
(2) PSA, TYPE W-1
PBA, R10-4b

CONSTRUCT: (3) 3" RMC, TYPE CUG
INSTALL: CABLES: A-10/C, B-5/C, C-5/C, D-2/C, E-10/C, F-5/C, G-5/C, H-2/C, I-10/C, J-5/C, K-5/C, L-5/C, M-2/C, N-10/C, O-5/C, P-5/C, Q-5/C, R-5/C, S-2/C, T-5/C U-5/C, 14-2/C #14, 1-18/C #18 (INTERCONNECT)



CONSTRUCT: 3" RMC, TYPE CUG
INSTALL: CABLES: N-10/C, O-5/C, P-5/C, Q-5/C, R-5/C, S-2/C

CONSTRUCT: 18" x 36" JUNCTION BOX
STA. 6+~~53~~ 60, 41'LT.

DETAIL "B"
N.T.S.

E-7

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL PLANS
FIRST ST. ℄ STATION 5+50
TO STATION 8+00
ROUTE 280 SECTION 7AA

FIRST STREET AND ORANGE STREET

GOODKIND & O'DEA, INC.
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=20'

28

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Lento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP. 98
FIRST STREET	LOU			DEC. 97

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

g:\civcadd\1820\revision\e071820.dgn
22 JAN 98
10:37:46

STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	29	

LOCATION : FIRST STREET / SUSSEX AVENUE

SEMI-ACTUATED BACKGROUND CYCLE WITH 3 SIGNAL COORDINATION

PEAK CYCLE LENGTH = 90 SECONDS
OFF PEAK CYCLE LENGTH = 60 SECONDS

PHASE	SIGNAL FACES						TIME (SECONDS)		
	1,2,3	4,5,6	7,8	9,10	11,12,13,14	15,16,17,18	AM PEAK	PM PEAK	OFF PEAK
1. FIRST STREET R.O.W.	G	G	R	R	DW	W	61-48	61-48	31-20
1. FIRST STREET PEDESTRIAN CLEARANCE	G	G	R	R	DW	FDW	10	10	10
1. FIRST STREET CHANGE	Y	Y	R	R	DW	DW	4	4	4
1. FIRST STREET CLEARANCE	R	R	R	R	DW	DW	2	2	2
2. SUSSEX AVENUE R.O.W.	R	R	G	G	DW	DW	7-20	7-20	7-16
2. SUSSEX AVENUE CHANGE	R	R	Y	Y	DW	DW	3	3	3
2. SUSSEX AVENUE CLEARANCE	R	R	R	R	DW	DW	3	3	3
EMERGENCY FLASH	FY	FY	FR	FR	DARK	DARK			
WITH PEDESTRIAN ACTUATION									
1. FIRST STREET R.O.W.	G	G	R	R	DW	W	48	48	18
1. FIRST STREET PEDESTRIAN CLEARANCE	G	G	R	R	DW	FDW	10	10	10
1. FIRST STREET CHANGE	Y	Y	R	R	DW	DW	4	4	4
1. FIRST STREET CLEARANCE	R	R	R	R	DW	DW	2	2	2
2. SUSSEX AVENUE R.O.W.	R	R	G	G	W	DW	6	6	6
2. SUSSEX AVENUE PEDESTRIAN CLEARANCE	R	R	G	G	FDW	DW	14	14	14
2. SUSSEX AVENUE CHANGE	R	R	Y	Y	DW	DW	3	3	3
2. SUSSEX AVENUE CLEARANCE	R	R	R	R	DW	DW	3	3	3
EMERGENCY FLASH	FY	FY	FR	FR	DARK	DARK			

NOTES:

1. AM PEAK PERIOD OPERATES - MONDAY THRU FRIDAY 6:00 AM TO 2:00 PM
   PM PEAK PERIOD OPERATES - MONDAY THRU FRIDAY 2:00 PM TO 10:00 PM
   OFF PEAK PERIOD OPERATES AT ALL OTHER TIMES.
2. DURING OFF PEAK PERIODS, TIMINGS REPRESENTS INDEPENDENT OR FREE FLOAT SIGNAL OPERATION.
3. CONTROLLER TO REST IN PHASE 1
4. VEHICLE EXTENSION INTERVAL - 2 SECONDS. PHASE 2.
5. INITIAL GREEN INTERVAL - 5 SECONDS.
6. MANUAL CONTROL TO BE DISCONNECTED.
7. MEMORY CIRCUIT IS TO BE IN OFF POSITION (PRESENCE MODE). PHASE 2.
8. BEGINNING OF YELLOW FOR PHASE 1, SHALL BE THE MASTER FOR OFFSETS FOR FIRST STREET / I-280 RAMPS AND FOR FIRST STREET / ORANGE STREET.

LOCATION : SUSSEX AVENUE CONNECTOR / SUSSEX AVENUE

SEMI-ACTUATED BACKGROUND CYCLE

PEAK CYCLE LENGTH = 90 SECONDS
OFF PEAK CYCLE LENGTH = 60 SECONDS

PHASE	SIGNAL FACES					TIME (SECONDS)		
	19,20,21	22,23	24,25	26,27	28,29	AM PEAK	PM PEAK	OFF PEAK
1. SUSSEX AVENUE R.O.W.	~~R~~	G	G	W	DW	63-33	63-33	33-18
1. SUSSEX AVENUE PEDESTRIAN CLEARANCE	~~R~~	G	G	FDW	DW	10	10	10
1. SUSSEX AVENUE CHANGE	~~R~~	Y	Y	DW	DW	3	3	3
1. SUSSEX AVENUE CLEARANCE	~~R~~	R	R	DW	DW	3	3	3
2. SUSSEX AVENUE CONN. R.O.W.	~~G~~	R	R	DW	DW	5-35	5-35	5-22
2. SUSSEX AVENUE CONN. CHANGE	~~Y~~	R	R	DW	DW	4	4	4
2. SUSSEX AVENUE CONN. CLEARANCE	~~R~~	R	R	DW	DW	2	2	2
EMERGENCY FLASH	~~FR~~	FY	FY	DARK	DARK			
WITH PEDESTRIAN ACTUATION								
1. SUSSEX AVENUE R.O.W.	~~R~~	G	G	W	DW	53-23	53-23	23-10
1. SUSSEX AVENUE PEDESTRIAN CLEARANCE	~~R~~	G	G	FDW	DW	10	10	10
1. SUSSEX AVENUE CHANGE	~~R~~	Y	Y	DW	DW	3	3	3
1. SUSSEX AVENUE CLEARANCE	~~R~~	R	R	DW	DW	3	3	3
2. SUSSEX AVENUE CONN. R.O.W.	~~G~~	R	R	DW	W	5	5	5
2. SUSSEX AVENUE CONN. PED. CLEAR.	~~G~~	R	R	DW	FDW	10	10	10
2. SUSSEX AVENUE CONN. VEH. EXTENSION	~~G~~	R	R	DW	DW	0-30	0-30	0-13
2. SUSSEX AVENUE CONN CHANGE	~~Y~~	R	R	DW	DW	4	4	4
2. SUSSEX AVENUE CONN. CLEARANCE	~~R~~	R	R	DW	DW	2	2	2
EMERGENCY FLASH	~~FR~~	FY	FY	DARK	DARK			

NOTES:

1. AM PEAK PERIOD OPERATES - MONDAY THRU FRIDAY 6:00 AM TO 2:00 PM
   PM PEAK PERIOD OPERATES - MONDAY THRU FRIDAY 2:00 PM TO 10:00 PM
   OFF PEAK PERIOD OPERATES AT ALL OTHER TIMES.
2. CONTROLLER TO REST IN PHASE 1.
3. VEHICLE EXTENSION INTERVAL - 2 SECONDS. PHASE 2.
4. INITIAL GREEN INTERVAL - 5 SECONDS.
5. MANUAL CONTROL TO BE DISCONNECTED.
6. MEMORY CIRCUIT IS TO BE IN OFF POSITION (PRESENCE MODE). PHASE 2.

NOTES:

1.) Proposed signal heads at Sussex Avenue intersections, and at the ramp and Orange Street intersections with First Street shall be mounted as shown on drawings E-5, E-6 and E-7. Horizontally mounted signals shall use a trombone mast arm.

2.) Proposed controllers shall be the standard 170 type or the new 2070 type.

3.) Pedestrian heads shall consist of the single housing type which include 6 inch incandescent type walk and don't walk symbols.

4.) Signs shall be attached to the signal pole mast arms with the cross street names and appropriate block number.

5.) Number 14 AWG wires shall be used for signal equipment.

6.) Proposed signal equipment shall be installed prior to construction and used to control traffic movement during construction at existing signalized intersections.

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Dipento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

AS-BUILT	JJF				SEP 98
FIRST ST.	LOU				DEC. 97
REVISION	BY	REV'D	ACC'D	DATE	

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

29 MAR 98
10:04:30

LOCATION : FIRST STREET/ I-280 RAMPS

SEMI-ACTUATED BACKGROUND CYCLE WITH 3 SIGNAL COORDINATION

PEAK CYCLE LENGTH = 90 SECONDS
OFF PEAK CYCLE LENGTH = ~~60~~ VARIABLE(1)

PHASE	SIGNAL FACES								TIME (SECONDS)		
WITH OUT PEDESTRIAN ACTUATION	1,3,4	2,16	9,13,14 (15,23)	5,6,7,8	10,11,12	17,18	19,20	21,22	AM PEAK	PM PEAK	OFF PEAK
1. FIRST STREET R.O.W.	G	G	G	R	~~R~~	W	DW (12)	DW (12)	58-27	58-33	15-7
1. FIRST STREET PEDESTRIAN CLEARANCE	G	G	G	R	~~R~~	FDW	DW	DW	~~5~~	~~5~~	~~5~~
1. FIRST STREET CHANGE	Y	Y	Y	R	~~R~~	DW	DW	DW	4 (8)	4 (8)	4 (8)
1. FIRST STREET CLEARANCE	R	R	R	R	~~R~~	DW	DW	DW	2	2	2
2. I-280 RAMP R.O.W.	R	R	R	G	~~G~~	DW	DW	DW	5-32	5-21	5-17
2. I-280 CHANGE	R	R	R	Y	~~G~~(10)	DW	DW	DW	4	4	4
2. I-280 CLEARANCE	R	R	R	R	~~G~~(11)	DW	DW	DW	2	2	2
3. FIRST ST NB LEAD	G	G/~~G~~	R	R	~~G~~	DW	DW	DW	4~~8~~	4~~15~~	4-6
3. FIRST ST CHANGE	G	G/~~Y~~	R	R	~~Y~~	DW	DW	DW	4	4	4
3. FIRST ST CLEARANCE	G	G	R	R	~~R~~	DW	DW	DW	2	2	2
3. EMERGENCY FLASH	FY	FY	FY	FR	~~FR~~	DARK	DARK	DARK			

NOTES:

1. AM PEAK PERIOD OPERATES - MONDAY THRU FRIDAY 6:00 AM TO 2:00 PM
   PM PEAK PERIOD OPERATES - MONDAY THRU FRIDAY 2:00 PM TO 10:00 PM
   OFF PEAK PERIOD OPERATES AT ALL OTHER TIMES (47-81 SECONDS)
2. DURING OFF PEAK PERIODS, TIMINGS REPRESENTS INDEPENDENT OR FREE FLOAT SIGNAL OPERATION.
3. CONTROLLER TO REST IN PHASE 1.
4. VEHICLE EXTENSION INTERVAL - 2 SECONDS. PHASE 2.
5. INITIAL GREEN INTERVAL - 4 SECONDS. PHASE 2.
6. MANUAL CONTROL TO BE DISCONNECTED.
7. MEMORY CIRCUIT IS TO BE IN OFF POSITION (PRESENCE MODE). PHASE 2.
8. OFFSET IS MEASURED FROM THE BEGINNING OF YELLOW FOR THE FIRST STREET/SUSSEX AVENUE NB AND SB MOVEMENTS (PHASE 1) TO THE BEGINNING OF YELLOW FOR THE NB AND SB MOVEMENTS (PHASE 1) (OFFSET = 0 SECONDS)
9. PEDESTRIAN PUSH BUTTON AND PEDESTRIAN MOTION DETECTOR SHALL SEPARATELY OR JOINTLY CALL PEDESTRIAN ACTUATION.
10. ~~Y~~ IF PHASE 3 IS SKIPPED
11. ~~R~~ IF PHASE 3 IS SKIPPED
12. ACTUATION OF PEDESTRIAN PUSH BUTTONS / DETECTORS SHALL GUARANTEE A WALK TIME OF 4 SECONDS FOLLOWED BY A FLASHING DONT WALK TIMEOF 36 SECONDS

NOTES :

1.) Proposed signal equipment shall conform to NJDOT standards.

2.) Proposed signal equipment shall be installed and operating before the temporary signal equipment is disconnected.

FIRST STREET AND I-280 RAMPS

LOOP DETECTOR SCHEDULE

SENSOR NO.	SENSOR CHANNEL	LOOP	MODE	SIZE	TYPE	NO. OF TURNS	μh
1	1	A	PRESENCE	6' x 6'	T	6	225
1	2	B	PRESENCE	6' x 6'	T	6	225
1	3	C	PRESENCE	6' x 6'	T	6	225
1	4	D	PRESENCE	6' x 6'	T	6	225
2	1	E	PRESENCE	6' x 6'	T	6	225
2	2	F	PRESENCE	6' x 6'	T	6	225
2	3	G	PRESENCE	6' x 6'	T	6	225
2	4	H	PRESENCE	6' x 6'	T	6	225
3	1	I	PRESENCE	6' x 6'	T	6	225
3	2	J	PRESENCE	6' x 6'	T	6	225
3	3	K	PRESENCE	6' x 6'	T	6	225
3	4	L	PRESENCE	6' x 6'	T	6	225
4	1	M	PRESENCE	6' x 6'	T	6	225
4	2	N	PRESENCE	6' x 6'	T	6	225
4	3	O	PRESENCE	6' x 6'	T	6	225
5	1	P	PRESENCE	6' x 6'	T	6	225
5	2	Q	PRESENCE	6' x 6'	T	6	225
5	3	R	PRESENCE	6' x 8'	T	6	220
5	4	S	PRESENCE	6' x 9'	T	5	215
7	1	T	PRESENCE	6' x 10'	T	5	210
6	1	U	PRESENCE	6' x 6'	T	6	225
6	2	V	PRESENCE	6' x 9'	T	5	215
6	3	W	PRESENCE	6' x 9'	T	5	215
6	4	X	PRESENCE	6' x 12'	T	5	215
7	2	Y	PRESENCE	6' x 12'	T	5	215
8	1	Z	PRESENCE	6' x 6'	T	6	215

NUMBER OF TURNS DETERMINED IN FIELD.

SENSOR NO.	SENSOR CHANNEL	LOOP	MODE	SIZE	TYPE	NO. OF TURNS	μh
8	2	AA	PRESENCE	6' x 6'	T	6	225
8	3	AB	PRESENCE	6' x 6'	T	6	225
8	4	AC	PRESENCE	6' x 6'	T	6	225
9	1	AD	PRESENCE	6' x 6'	T	6	225
9	2	AE	PRESENCE	6' x 7'	T	6	225
9	3	AF	PRESENCE	6' x 7'	T	6	225
9	4	AG	PRESENCE	6' x 7'	T	6	225
10	1	AH	PRESENCE	6' x 7'	T	6	225
11	1	AI	PRESENCE	6' x 19'	T	4	205
11	2	AJ	PRESENCE	6' x 19'	T	4	205
11	3	AK	PRESENCE	6' x 7'	T	6	225
11	4	AL	PRESENCE	6' x 8'	T	6	225
12	1	AM	PRESENCE	6' x 19'	T	4	205
12	2	AN	PRESENCE	6' x 19'	T	4	205
13	1	AO	PRESENCE	6' x 6'	T	6	225
13	2	AP	PRESENCE	6' x 6'	T	6	225
13	2	AQ	PRESENCE	6' x 6'	T	6	225
13	4	AR	PRESENCE	6' x 10'	T	5	210
7	3	AS	PRESENCE	6' x 14'	T	5	210
7	4	AT	PRESENCE	6' x 15'	T	5	210

NUMBER OF TURNS DETERMINED IN FIELD.

SUBMITTED BY: Paul J. Scagnelli 3/9/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

LOCATION : FIRST STREET/ ORANGE STREET

SEMI-ACTUATED BACKGROUND CYCLE WITH 3 SIGNAL COORDINATION

PEAK CYCLE LENGTH = 90 SECONDS
OFF PEAK CYCLE LENGTH = 60 SECONDS

PHASE	SIGNAL FACES							TIME (SECONDS)		
	1,2,3,4	5,6	7,8,9	10,11	12,13	14,15	16,17,18,19	AM PEAK	PM PEAK	OFF PEAK
1. FIRST STREET NB R.O.W.	G	R	R	R	DW	DW	W	37-26	46-22	18-12
1. FIRST STREET PEDESTRIAN CLEARANCE	G	R	R	R	DW	DW	FDW	12	12	12
1. FIRST STREET CHANGE	Y	R	R	R	DW	DW	DW	4	4	4
1. FIRST STREET CLEARANCE	R	R	R	R	DW	DW	DW	2	2	2
2. FIRST STREET SB R.O.W.	R	G	R	R	DW	DW	DW	18	9	9
2. FIRST STREET CHANGE	R	Y	R	R	DW	DW	DW	3	3	3
2. FIRST STREET CLEARANCE	R	R	R	R	DW	DW	DW	2	2	2
3. ORANGE STREET R.O.W.	R	R	G	G	DW	DW	DW	5-16	5-29	5-9
3. ORANGE STREET CHANGE	R	R	Y	Y	DW	DW	DW	4	4	4
3. ORANGE STREET CLEARANCE	R	R	R	R	DW	DW	DW	3	3	3
EMERGENCY FLASH	FY	FY	FR	FR	DARK	DARK	DARK			
WITH PEDESTRIAN ACTUATION										
1. FIRST STREET NB R.O.W.	G	R	R	R	DW	DW	W	29	32-22	5
1. FIRST STREET PEDESTRIAN CLEARANCE	G	R	R	R	DW	DW	FDW	12	12	12
1. FIRST STREET CHANGE	Y	R	R	R	DW	DW	DW	4	4	4
1. FIRST STREET CLEARANCE	R	R	R	R	DW	DW	DW	2	2	2
2. FIRST STREET SB R.O.W.	R	G	R	R	DW	DW	DW	12	9	6
2. FIRST STREET CHANGE	R	Y	R	R	DW	DW	DW	3	3	3
2. FIRST STREET CLEARANCE	R	R	R	R	DW	DW	DW	2	2	2
3. ORANGE STREET R.O.W.	R	R	G	G	W	W	DW	8	6	6
3. ORANGE STREET PEDESTRIAN CLEARANCE	R	R	G	G	FDW	FDW	DW	13	13	13
3. ORANGE STREET VEHICLE EXTENSION	R	R	G	G	DW	DW	DW	0	0-10	0
3. ORANGE STREET CHANGE	R	R	Y	Y	DW	DW	DW	4	4	4
3. ORANGE STREET CLEARANCE	R	R	R	R	DW	DW	DW	3	3	3
EMERGENCY FLASH	FY	FY	FR	FR	DARK	DARK	DARK			

NOTES:

1. AM PEAK PERIOD OPERATES - MONDAY THRU FRIDAY 6:00 AM TO 2:00 PM
   PM PEAK PERIOD OPERATES - MONDAY THRU FRIDAY 2:00 PM TO 10:00 PM
   OFF PEAK PERIOD OPERATES AT ALL OTHER TIMES
2. DURING OFF PEAK PERIODS, TIMINGS REPRESENTS INDEPENDENT OR FREE FLOAT SIGNAL OPERATION.
3. CONTROLLER TO REST IN PHASE 1.
4. VEHICLE EXTENSION INTERVAL - 2 SECONDS. PHASE 3.
5. INITIAL GREEN INTERVAL - 5 SECONDS.
6. MANUAL CONTROL TO BE DISCONNECTED.
7. MEMORY CIRCUIT IS TO BE IN OFF POSITION (PRESENCE MODE). PHASES 2.
8. OFFSET IS MEASURED FROM THE BEGINNING OF YELLOW FOR THE FIRST STREET/SUSSEX AVENUE NB AND SB MOVEMENTS (PHASE 1) TO THE BEGINNING OF YELLOW FOR THE NB MOVEMENT (PHASE 1) AT THIS INTERSECTION. AM PEAK OFFSET IS 72 SECONDS. PM PEAK OFFSET IS 70 SECONDS.

NOTES :

1.) Proposed signal heads (except No. 1, 3 and 4) shall be mounted horizontally using the trombone mast arm.

2.) Proposed controllers shall be the standard 170 type or the new 2070 type.

3.) Pedestrian heads shall consist of the single housing type which include 6 inch incandescent type walk and don't walk symbols.

4.) Signs shall be attached to the signal pole mast arms with the cross street names and appropriate block number.

5.) Number 14 AWG wires shall be used for signal equipment.

6.) Proposed signal equipment shall be installed prior to construction and used to control traffic movement during construction at existing signalized intersections.

E-8
E-8

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL PLANS

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

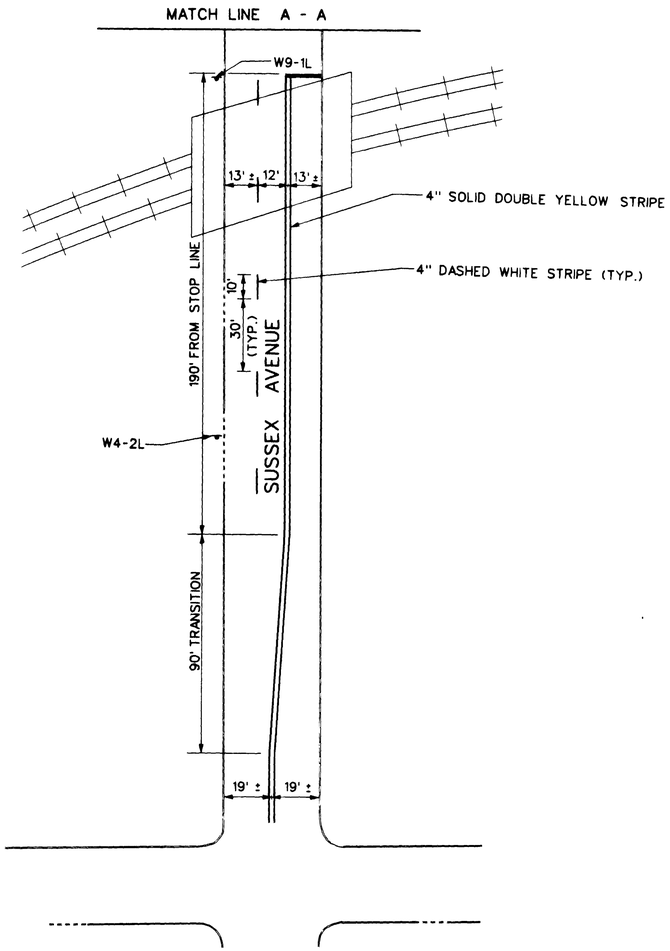
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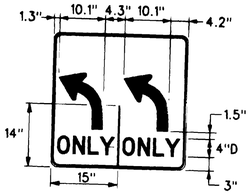
29

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	30	

30' 15' 0 30' 60'
SCALE IN FEET

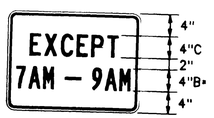
N.J. PLANE COORDINATE SYSTEM





R(NJ)3-8V
30" X 30"
(6.3 S.F.)

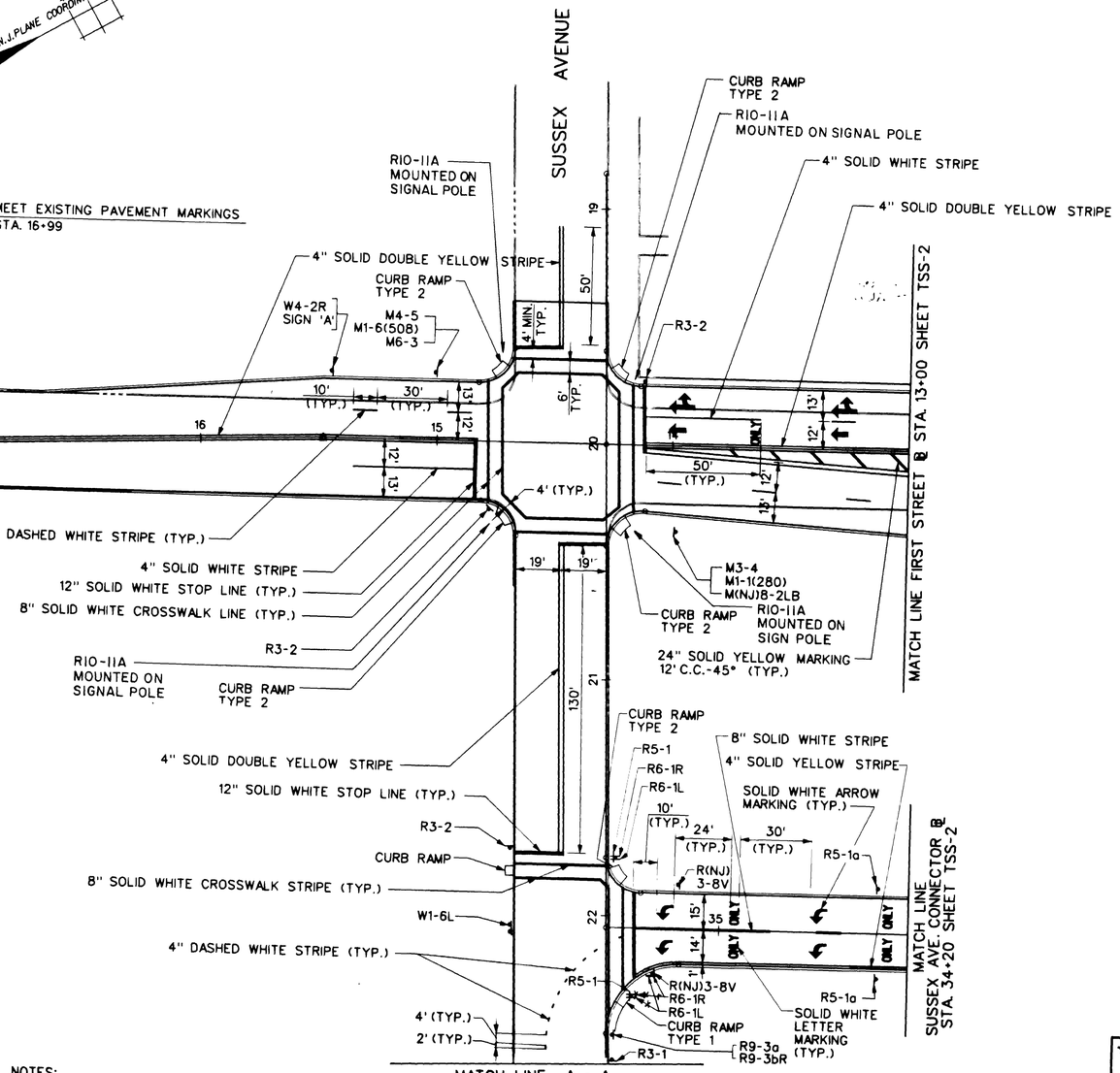
BLACK NON-REFLECTIVE TEXT, BORDER, AND ARROWS ON WHITE ENCAPSULATED LENS BACKGROUND.
BORDER: ⅜" MARGIN: ⅜"
CORNER RADIUS: 1½"



* REDUCE SPACING 20%

SIGN A
24" X 18"
(3 S.F.)

BLACK NON-REFLECTIVE TEXT AND BORDER ON YELLOW ENCAPSULATED LENS BACKGROUND.
BORDER: ⅜" MARGIN: ⅜"
CORNER RADIUS: 1½"



LEGEND:

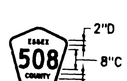
GROUND-MOUNTED SIGN



M1-1: 30" X 24"



M1-1: 30" X 24"
FOR GUIDE SIGN USE ONLY



M1-6: 24" X 24"

NOTES:

1. AUXILIARY MARKERS MOUNTED ON ASSEMBLIES WITH M1-1 INTERSTATE ROUTE MARKER SHALL HAVE WHITE LEGEND AND BORDER ON BLUE BACKGROUND.
2. AUXILIARY MARKERS MOUNTED ON ASSEMBLIES WITH M1-6 COUNTY ROUTE MARKER SHALL HAVE YELLOW LEGEND AND BORDER ON BLUE BACKGROUND.
3. ALL PERMANENT LONGITUDINAL CENTER, EDGE AND LANELINES, AND EDGE LINES ON RAMPS AND LEFT TURN SLOTS, SHALL BE LONG LIFE EPOXY RESIN TRAFFIC STRIPES.
4. ALL PERMANENT DIAGONAL GORE LINES, CROSSWALKS, STOP LINES, WORDS, ARROWS AND OTHER PAVEMENT SYMBOLS SHALL BE LONG LIFE THERMOPLASTIC TRAFFIC MARKINGS.

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Lato
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP. '98
FIRST ST	LOU			DEC '97

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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TSS-1
TSS-4

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TRAFFIC STRIPING AND SIGNING PLANS

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
La Robbins 11/25/97
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

30

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	31	

30' 15' 0 30' 60'
SCALE IN FEET

N.J. PLANE COORDINATE SYSTEM

MATCH LINE RELOC. RAMP-TE @ STA. 28+00 SHEET TSS-3

MATCH LINE B-B SHEET TSS-3

MATCH LINE FIRST STREET @ STA. 13+00 SHEET TSS-1

MATCH LINE SUSSEX AVE. CONNECTOR @ STA. 34+20 SHEET TSS-1

RELOC. RAMP TF

RAMP TWF

FIRST STREET

ORANGE STREET

SUSSEX AVENUE CONNECTOR

D(NJ) 9-2A
D(NJ) 9-2BR

4" SOLID YELLOW STRIPE

4" SOLID WHITE STRIPE

8" SOLID WHITE STRIPE

RELOCATE EXIST. SIGN "WELCOME TO NEWARK"

CURB RAMP TYPE 1

12" SOLID WHITE STOP STRIPE (TYP.)

R9-3a
R9-3bL

24" SOLID WHITE 12' C.C. -45° (TYP.)

4" DASHED WHITE STRIPE

8" SOLID WHITE STRIPES

R(NJ)5-10a

CURB RAMP TYPE 2

24" SOLID YELLOW 12' C.C. -45° (TYP.)

4" SOLID DOUBLE YELLOW STRIPE

12" SOLID WHITE STOP LINE (TYP.)

8" SOLID WHITE CROSSWALK LINE (TYP.)

M3-4
M1-1(280)
M(NJ)8-2LB

M3-4
M1-1(280)
M(NJ)8-2RB

D(NJ) 9-2A
M (NJ) 6-3B

MEET EXISTING STRIPES

M3-4
M1-1(280)
M6-1RB

R10-11a

R3-7

R5-1a

GA-1

GA-5

GA-2

R(NJ)3-8e1

R10-11a

R5-1

R3-4

R4-7
OM-1

R3-3

R9-3a
R9-3bL

OM-3L MOUNT AT 4' HEIGHT

M3-4
M1-1(280)
M6-1LB

R3-1

R(NJ)3-8W

R(NJ)3-8G

R9-3a
R9-3bR

4" DASHED WHITE STRIPE (TYP.)

4" SOLID DOUBLE YELLOW STRIPE

24" SOLID YELLOW MARKING 12' C.C.-45° (TYP.)

SOLID WHITE LETTER MARKING (TYP.)

8" SOLID WHITE STRIPE

SOLID WHITE ARROW MARKING (TYP.)

R(NJ)3-8W

SIGN REPLACED BY THE CITY OF NEWARK

~~RELOCATED SIGN "WELCOME TO NEWARK"~~

CURB RAMP TYPE 1

8" SOLID WHITE CROSSWALK STRIPE

W1-1R
W13-1(•)

SEE NOTE 3

RETAINING WALL

CURB RAMP TYPE 2

W9-1L

W10-1

W4-2L

R3-2 SIGN B

4" DASHED WHITE STRIPE (TYP.)

4" SOLID DOUBLE YELLOW STRIPE

M3-4
M1-1(280)
M6-3B

MEET EXISTING STRIPES

R(NJ)3-8V

4" DASHED WHITE STRIPE

4" DASHED WHITE STRIPE (TYP.)

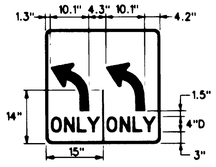
R(NJ)3-8V

7AM – 9AM
4PM – 6PM

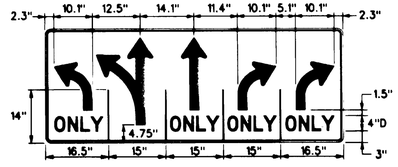
4"
4"B*
2"
4"B*
4"

* REDUCE SPACING 20%

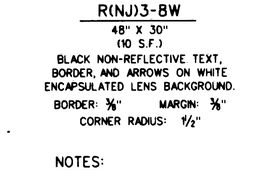
SIGN B
24" X 18"
(3 S.F.)
BLACK NON-REFLECTIVE TEXT AND BORDER ON YELLOW ENCAPSULATED LENS BACKGROUND.
BORDER: 3/8" MARGIN: 3/8"
CORNER RADIUS: 1/2"



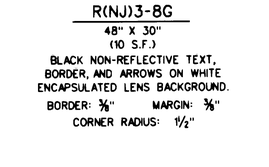
R(NJ)3-8V
30" X 30"
(6.3 S.F.)
BLACK NON-REFLECTIVE TEXT, BORDER, AND ARROWS ON WHITE ENCAPSULATED LENS BACKGROUND.
BORDER: 3/8" MARGIN: 3/8"
CORNER RADIUS: 1/2"



R(NJ)3-8e1
84" X 30"
(17.5 S.F.)
BLACK NON-REFLECTIVE TEXT, BORDER, AND ARROWS ON WHITE ENCAPSULATED LENS BACKGROUND.
BORDER: 3/8" MARGIN: 3/8"
CORNER RADIUS: 1/2"



R(NJ)3-8W
48" X 30"
(10 S.F.)
BLACK NON-REFLECTIVE TEXT, BORDER, AND ARROWS ON WHITE ENCAPSULATED LENS BACKGROUND.
BORDER: 3/8" MARGIN: 3/8"
CORNER RADIUS: 1/2"



R(NJ)3-8G
48" X 30"
(10 S.F.)
BLACK NON-REFLECTIVE TEXT, BORDER, AND ARROWS ON WHITE ENCAPSULATED LENS BACKGROUND.
BORDER: 3/8" MARGIN: 3/8"
CORNER RADIUS: 1/2"

NOTES:

1. ALL PERMANENT LONGITUDINAL CENTER, EDGE AND LANE LINES, AND EDGE LINES ON RAMPS AND LEFT TURN SLOTS, SHALL BE LONG LIFE EPOXY RESIN TRAFFIC STRIPES.
2. ALL PERMANENT DIAGONAL GORE LINES, CROSSWALKS, STOP LINES, WORDS, ARROWS AND OTHER PAVEMENT SYMBOLS SHALL BE LONG LIFE THERMOPLASTIC TRAFFIC MARKINGS.
3. SPEED LIMIT TO BE DETERMINED BY NJDOT TRAFFIC ENGINEERING AND SAFETY PROGRAM.

TSS-2

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Fato
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JNF			SEP. '98
FIRST ST	LOU			DEC., 97

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TRAFFIC STRIPING AND SIGNING PLANS

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
L. K. Robbins 11/19/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

31

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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23 JAN. 98
13:26:09

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9248(005)	32	

OVERHEAD SIGN STRUCTURE
RELOC. RAMP-TE @ STA. 21+10
SEE BRIDGE PLANS
SHEET NO. B-7

GO-1

MEET EXISTING PAVEMENT MARKINGS
(SEE NOTE)

4" SOLID WHITE STRIPE

4" DASHED WHITE STRIPE (TYP.)

4" SOLID YELLOW STRIPE

4" SOLID YELLOW STRIPE

4" SOLID WHITE STRIPE

W3-3 (STRAP TO EXISTING LIGHT STANDARD SHAFT)

8" SOLID WHITE STRIPE

REMOVE EXISTING SIGN AND BEACON

M3-4
M1-1(280)
M(NJ)8-2RB

R3-3

4" WHITE

4" YELLOW

RAMP - TW

RAMP - TE25

RELOCATED RAMP - TE

STA. 28+60

STA. 26+50

GA-4
GA-3
D(NJ)9-2A
D(NJ)9-2BR

4" DASHED WHITE STRIPE (TYP.)

W4-3R(S)

R(NJ)3-8e1

SOLID WHITE LETTER MARKING (TYP.)

SOLID WHITE ARROW MARKING (TYP.)

8" SOLID WHITE STRIPE

M4-5
M1-6(50B)
M6-1R

RAMP - TWF

4" SOLID WHITE STRIPE

4" SOLID YELLOW STRIPE

MEET EXISTING PAVEMENT MARKINGS

M3-4
M1-1(280)
M6-1RB

M3-4
M1-1(280)
M6-3B

R(NJ)5-10a

4" SOLID DOUBLE YELLOW STRIPE

ORANGE STREET

4" DOUBLE SOLID YELLOW STRIPE

24" SOLID YELLOW
12' C.C. -45° (TYP.)

BRIDGE PRESENTLY CLOSED

2ND STREET

R3-7

M3-4
M1-1(280)
M6-1LB

MATCH LINE RELOC. RAMP-TE @ STA. 28+00 SHEET TSS-2

MATCH LINE B-B SHEET TSS-2

N.J. PLANE COORDINATE SYSTEM

NOTE:
EXTEND STRIPING TO THE LIMITS DISTURBED DURING TRAFFIC CONTROL OPERATIONS.

30' 15' 0 30' 60'
SCALE IN FEET

TSS-3

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TRAFFIC STRIPING AND SIGNING PLANS

ROUTE 280 SECTION 7AA

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Dipento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

GOODKIND & O'DEA, INC.
Louis K. Robbins 1/29/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

32

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP. 98
FIRST ST.	LOU			DEC.' 97

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

g:\civcadd\1820\revision\tss31820.dgn
14 JAN 98
15:48:04

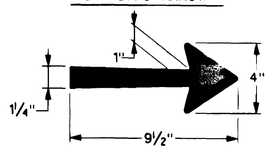
STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	33	

IDENT. NO.	STATION	TEXT	U.C.	L.C.	CAPS	NO. SIZE	SHIELD SIZE	ARROW SIZE	VERTICAL SPACE	SIZE (INCLUDES BORDER)	WORK TO BE DONE
GA-1	RELOC. RAMP TE STA. 27+90	↑ SUSSEX AVE EAST ← FIRST ST NORTH FIRST ST SOUTH →			6D 6D 6D			12.4"X 8" @90° 12.4"X 8" @180° 12.4"X 8"	7.25 | 10.5 12.5 | 6 3.94 | 6.09 1.13 3.94 | 6.09 8.0 | 6 3.44 | 4.44 1.13 3.44 | 4.44 8.0 | 6 7.25 | 8.2	10'-6" X 5'-0" (52.5 S.F.)	SEE NOTE 2 SEE NOTE 3
GA-2	FIRST STREET STA. 8+85	NORTH 280 WEST The Oranges ←	8	6	8/6	10D	30X24 M1-1	24¼"X 15⅛" @180°	7.44 24 8 8 8 15.13 7.43	8'-0" X 6'-6" (52.0 S.F.)	SEE NOTE 2 SEE NOTE 3

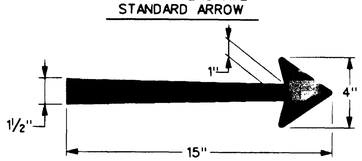
NOTES:

1. ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED.
2. PANEL SHALL HAVE WHITE DEMOUNTABLE REFLECTORIZED DIAMOND GRADE TEXT, BORDER AND ARROW ON GREEN ENCAPSULATED LENS BACKGROUND.
3. NUMERALS SHALL BE OPTICALLY SPACED ABOUT CENTERLINE OF M1-1 INTERSTATE ROUTE SHIELD.
4. SEE CONSTRUCTION DETAILS SHEET CD-3 FOR SIGN SUPPORT DATA TABLES.

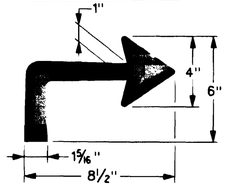
9½"X4" INTERSTATE STANDARD ARROW



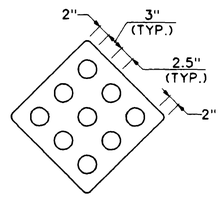
15"X4" INTERSTATE STANDARD ARROW



8½"X6" INTERSTATE STANDARD ADVANCE TURN ARROW



IDENT. NO.	STATION	TEXT	U.C.	L.C.	CAPS	NO. SIZE	SHIELD SIZE	ARROW SIZE	VERTICAL SPACE	SIZE (INCLUDES BORDER)	WORK TO BE DONE
GO-1	RELOC. RAMP TE STA. 21+15	Sussex Ave East First St North BRANCH BROOK PARK First St South UMDNJ NJIT	16 | 16	12 | 12	15/|15/ 12 | 12 12 12			14.7"X 14.0" SEE DETAIL	28 16 28 20.5 | 20.5 16 | 16 12 | 12 16 | 140 | 16 12 | 12 12 | 12 36 | 12 55.5 | 28 | 55.5	34'-0" X 20'-0" (680.0 S.F.)	PANEL SHALL HAVE WHITE DEMOUNTABLE REFLECTORIZED DIAMOND GRADE TEXT AND BORDER ON GREEN ENCAPSULATED LENS BACKGROUND. 120" X 36" BRANCH BROOK PARK PANEL SHALL HAVE WHITE ENCAPS. LENS TEXT ON BROWN ENCAPS. LENS BACKGROUND WITH NO BORDER (SEE DETAIL.)

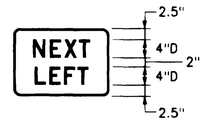


OM-1

18" X 18"
(2.3 S.F.)

YELLOW PRISMATIC REFLECTORS ON YELLOW ENCAPSULATED LENS BACKGROUND, NO BORDER

MOUNT AT 4' HEIGHT



M(NJ)8-2LB (Interstate)

21" x 15"
(2.2 S.F.)

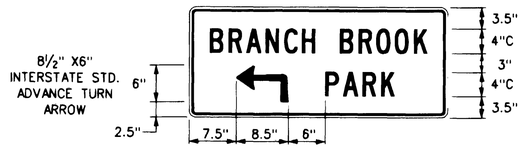
WHITE ENCAPSULATED LENS TEXT AND BORDER ON BLUE ENCAPSULATED LENS BACKGROUND.

BORDER: ½"
CORNER RADIUS: ½"



MOUNT TO GO-1
(SEE SIGN TABLE)

8½" X6" INTERSTATE STD. ADVANCE TURN ARROW

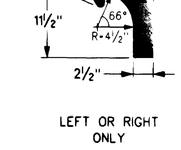


GA-4

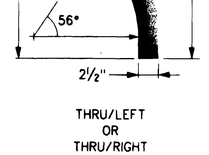
3'-6" X 1'-6"
(5.3 S.F.)

WHITE ENCAPSULATED LENS TEXT, BORDER, AND ARROW ON BROWN ENCAPSULATED LENS BACKGROUND.

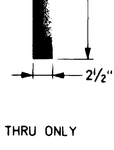
BORDER: ⅜" MARGIN: ⅜"
CORNER RADIUS: ⅛"



LEFT OR RIGHT ONLY



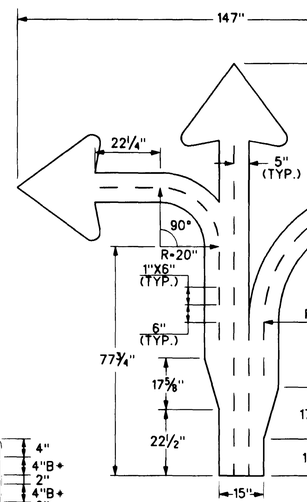
THRU/LEFT OR THRU/RIGHT



THRU ONLY

ARROW DETAILS FOR R(NJ)3-8 SERIES SIGNS

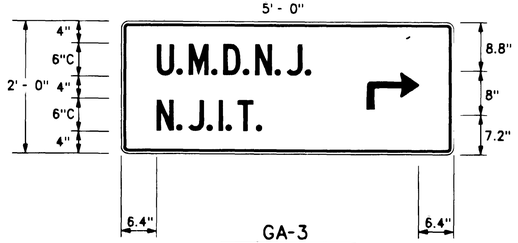
USE STANDARD ARROW DESIGN FOR ARROW HEADS



DIAGRAMMATIC ARROW

USE STANDARD ARROW DESIGN FOR ARROW HEADS

5' - 0"



8½" X6" INTERSTATE STD. ADVANCE TURN ARROW

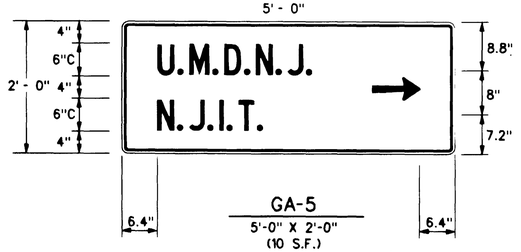
GA-3

5'-0" X 2'-0"
(10 S.F.)

YELLOW ENCAPSULATED LENS TEXT, BORDER, AND ARROWS ON BLUE ENCAPSULATED LENS BACKGROUND.

BORDER: ⅜" MARGIN: ⅜"
CORNER RADIUS: ⅛"

5' - 0"

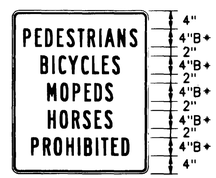


GA-5

5'-0" X 2'-0"
(10 S.F.)

YELLOW ENCAPSULATED LENS TEXT, BORDER, AND ARROWS ON BLUE ENCAPSULATED LENS BACKGROUND.

BORDER: ⅜" MARGIN: ⅜"
CORNER RADIUS: ⅛"



15" X 4" INTERSTATE STD. ARROW @90°

R(NJ)5-10a

30" X 36"
(7.5 S.F.)

BLACK NON-REFLECTIVE TEXT AND BORDER ON WHITE ENCAPSULATED LENS BACKGROUND.

+ INCREASE LETTER SPACING 20%
BORDER: ⅜" MARGIN: ⅜"
CORNER RADIUS: ½"

SUBMITTED BY: Paul A. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Lepito
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
FIRST ST.	LOU			DEC.'97

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

SIGN TABLE AND SIGN DETAILS

TSS-4 / TSS-4

NEW JERSEY DEPARTMENT OF TRANSPORTATION

TRAFFIC STRIPING AND SIGNING PLANS

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Lou Robbins 1/29/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: N.T.S.

33

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (36) 60	1	132

133

C.S.# 0730 & C.S.# 0731

SHEET NO.	INDEX OF SHEETS
1	KEY SHEET
2 - 3	ESTIMATE OF QUANTITIES
4 - 7	DISTRIBUTION OF QUANTITIES
8 - 9	TYPICAL SECTIONS
10 - 11	ALIGNMENT
12 - 13	DEMOLITION PLANS
14 - 17	PLAN SHEETS
18 - 20	DRAINAGE & UTILITY RELOCATION PLANS
21 - 23	GRADING, SIGNING & LANDSCAPING PLANS
24 - 28	ELECTRICAL PLANS
29 - 35	PROFILES
36 - 70	CONSTRUCTION DETAILS
71	EARTHWORK SUMMARY
72 - 87	CROSS SECTIONS
88 - 132	BRIDGE, WALL & SIGN STRUCTURE PLANS
133	PIER #8 E.B. REVISION (SUPPLEMENTAL)

UTILITY COMPANIES		
PUBLIC SERVICE ELECTRIC & GAS COMPANY	—	GAS & ELECTRIC
NEW JERSEY BELL TELEPHONE COMPANY	—	TELEPHONE
CITY OF NEWARK		
DIRECTOR OF PUBLIC WORKS	—	WATER & SEWERS
POLICE SIGNAL SUPT.	—	POLICE SIGNAL SYSTEM
FIRE ALARM SUPT.	—	FIRE ALARM SYSTEM
ERIE - LACKAWANNA R.R. CO.		RAILROAD
PUBLIC SERVICE COORDINATED TRANSPORT OF NEW JERSEY	—	CITY RAILWAY

State of New Jersey
Department of Transportation

PLANS OF

ROUTE 280 SECTION 7 D

From Sixth Street to the
Newark City Railway

GRADING, DRAINAGE, PAVING,
VIADUCT CONSTRUCTION AND WALLS

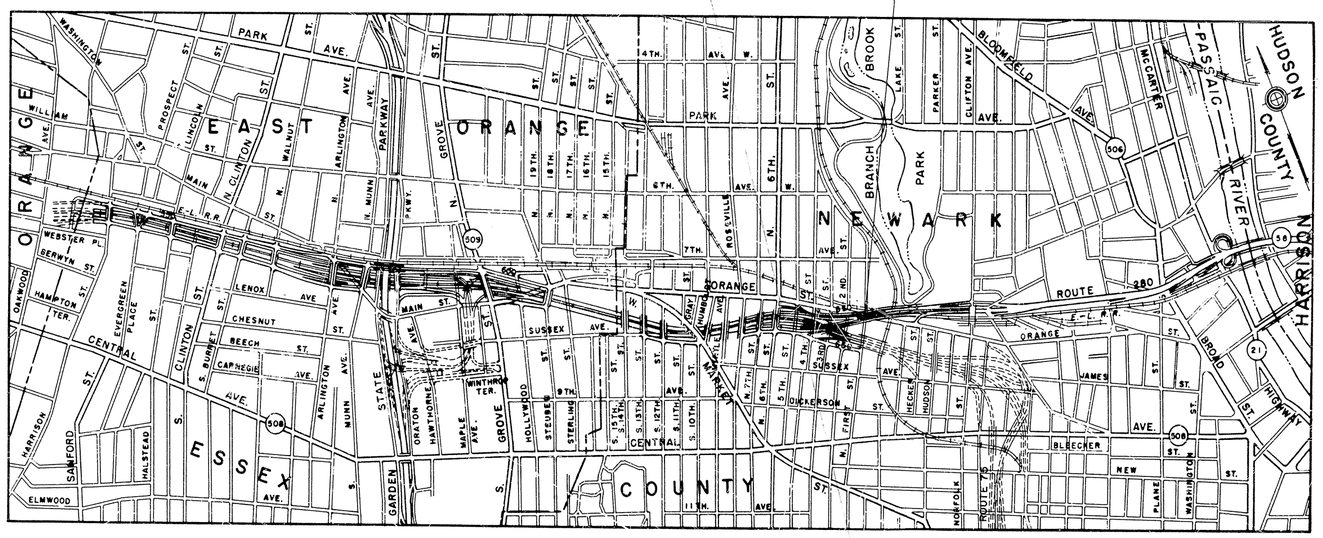
City of Newark — Essex County
Scales as Indicated — February 1968

AS BUILT

BEGIN PROJECT
BASELINE ROUTE 280 E.B. STA. 640 + 19.00

℄ OF FIRST ST.
C.S.# 0730 C.S.# 0731

END FEDERAL PROJECT NO. N.J.-I-280-6(36)60
BASELINE ROUTE 280 E.B. 656 + 55.96



END PROJECT
BASELINE ROUTE 280 E.B. STA. 657 +00.00

RESIDENT ENGINEER: WOLFRIED BLUMFELD
CONTRACTOR: SCHIAVONE CONSTRUCTION CO, INC.

DATE CONSTRUCTION STARTED: 07-17-67
DATE CONSTRUCTION COMPLETED: 03-14-68

AS BUILTS PREPARED BY NEWARK SURFACE DESIGN
DATE: 6-3-72
REFERENCES: BOOKS [illegible]

DESIGN DATA

ADT 1965	=	22,300
ADT 1975	=	49,700
DHV 1975	=	4,750
D	=	55%
T	=	4%
V	=	50M.P.H.

KEY MAP

SCALE: 1" = 1,000'

BEGIN FEDERAL PROJECT NO. N.J.-I-280-6(36)60
BASELINE ROUTE 280 E.B. STA. 643 + 16.00

STANDARD HIGHWAY SPECIFICATIONS OF 1961 TO GOVERN

LENGTH OF PROJECT = 1681.00 LIN. FT. = 0.318 MILE
LENGTH OF FEDERAL PROJECT NO. N.J.-I-280-6(36)60 = 1339.96 LIN. FT. = 0.254 MILE

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS
APPROVED
Division Engineer — Date

Submitted by _____ Director of Design, Transportation — Date
Approved by J.R. Schuyler State Highway Engineer — 3-11-68 Date
Approved by _____ Commissioner of Transportation — Date

1/132

7D

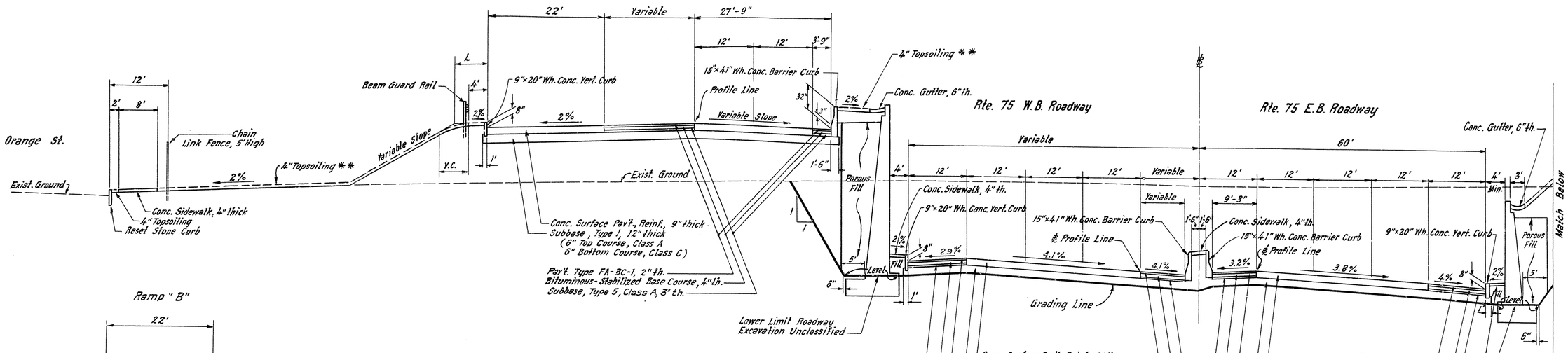
0731 001 133

SCALE: HOR. 1"= 10'
VERT. 1"= 5'

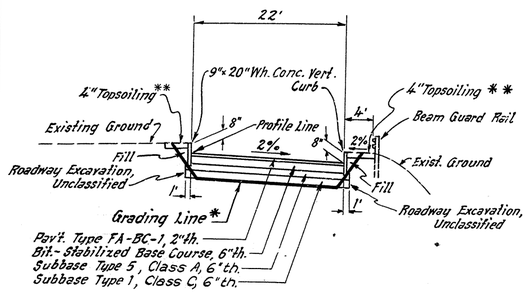
Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N.J. - I - 280 - 6 (36) 60	8	192

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Ramp "B" Rte. 280 W.B. Roadway

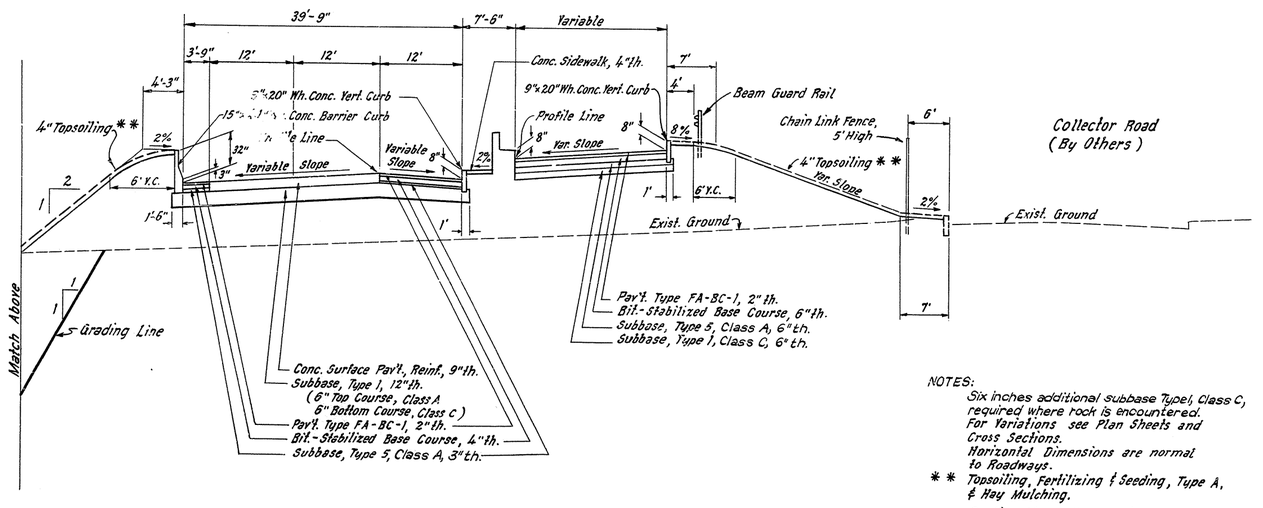


Ramp "B"



TYPICAL CROSS SECTION - SUPERELEVATED - VICINITY RAMP "B" STA. 642 + 00

Rte. 280 E.B. Roadway Ramp "D"



TYPICAL CROSS SECTION - SUPERELEVATED - VICINITY ℄ STA. 645 + 00

HEIGHT OF FILL	SIDE SLOPE	V.C.	DIST. "L" TO P.V.I.
0:5'	6:1	4'	2'
5':9'	4:1	6'	3'
9' and above	2:1	6'	7'
Cut	2:1	6'	7'

NOTES:
Six inches additional subbase Type 1, Class C, required where rock is encountered. For Variations see Plan Sheets and Cross Sections.
Horizontal Dimensions are normal to Roadways.
** Topsoiling, Fertilizing & Seeding, Type A, & Hay Mulching.
Grading Line follows paving cross slopes as indicated except where Level Line is shown.
* Grading Line for Roadway - Under Previous Contract.

State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

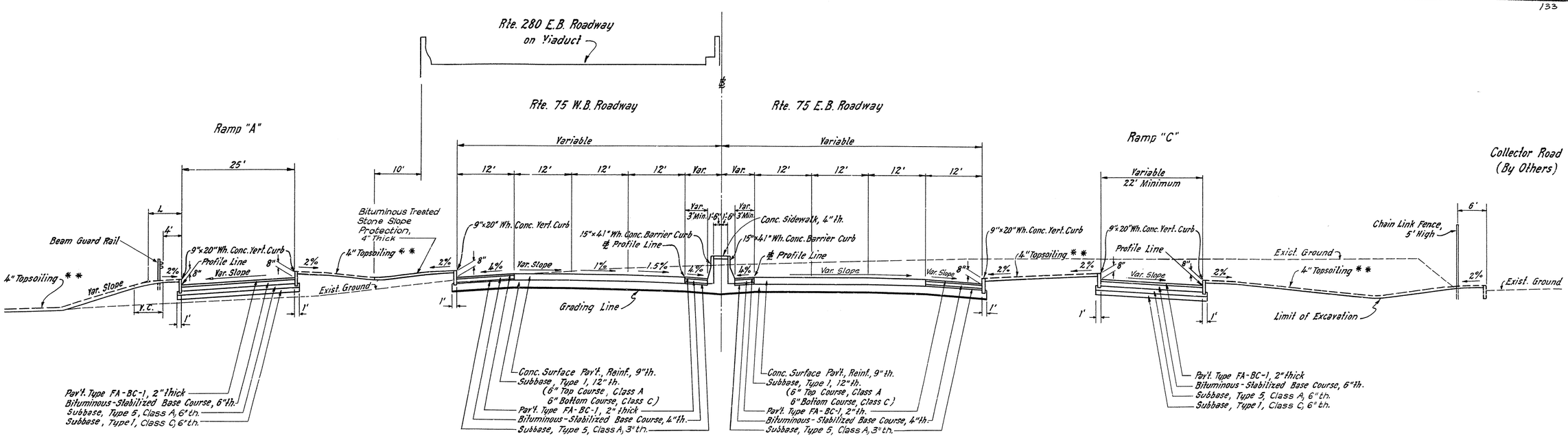
8
192
133

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by R. Larsen Traced by M. Alban Checked by L. King

0731 008 133

SCALE : HOR. 1"= 10'
VERT. 1"= 5'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (36) 60	9	132 / 133



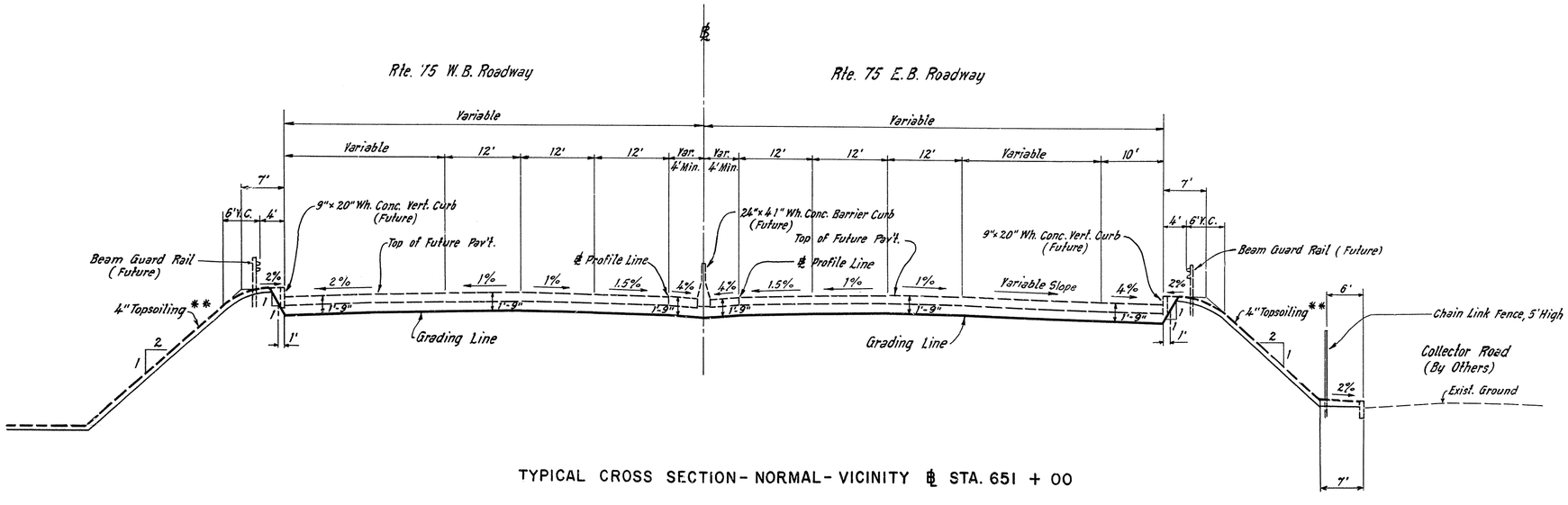
HEIGHT OF FILL	SIDE SLOPE	V.C.	DIST. "L" TO P.V.I.
0 : 5'	6 : 1	4'	2'
5 : 9'	4 : 1	6'	3'
9' and above	2 : 1	6'	7'
Cut	2 : 1	6'	7'

TYPICAL CROSS SECTION - TRANSITION - VICINITY ℄ STA. 649 + 00

NOTES:
For Variations see Plan Sheets and Cross Sections.
Horizontal Dimensions are normal to Roadways.

* * 4" Topsoiling, Fertilizing & Seeding, Type A, & Hay Mulching.

Grading Line follows paving cross slopes as indicated except where Level Line is shown.



TYPICAL CROSS SECTION - NORMAL - VICINITY ℄ STA. 651 + 00

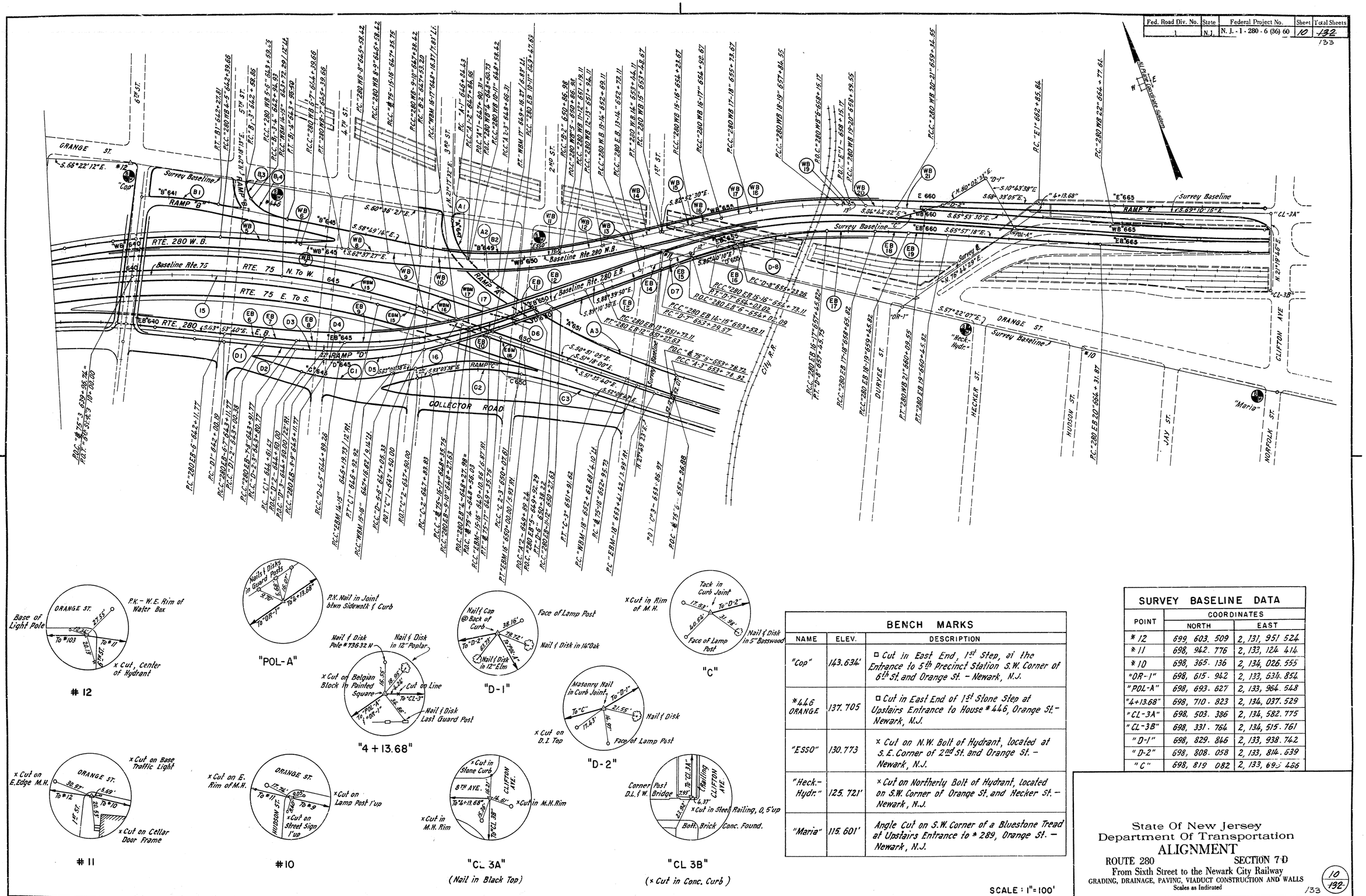
Made by R. Larsen Checked by M. Allan Checked by J. King

State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WA...
Scales as Indicated

9 / 132 / 133

0731 009 133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (36) 60	10	132
				133



#12

"POL-A"

"4 + 13.68"

"D-1"

"D-2"

"C"

#11

#10

"CL 3A"
(Nail in Black Top)

"CL 3B"
(x Cut in Conc. Curb)

BENCH MARKS

NAME	ELEV.	DESCRIPTION
"Cop"	143.634'	□ Cut in East End, 1st Step, at the Entrance to 5th Precinct Station S.W. Corner of 6th St. and Orange St. - Newark, N.J.
*446 ORANGE	137.705	□ Cut in East End of 1st Stone Step at Upstairs Entrance to House *446, Orange St. - Newark, N.J.
"ESSO"	130.773	x Cut on N.W. Bolt of Hydrant, located at S.E. Corner of 2nd St. and Orange St. - Newark, N.J.
"Heck.-Hydr."	125.721'	x Cut on Northerly Bolt of Hydrant, located on S.W. Corner of Orange St. and Hecker St. - Newark, N.J.
"Maria"	115.601'	Angle Cut on S.W. Corner of a Bluestone Tread at Upstairs Entrance to *289, Orange St. - Newark, N.J.

SURVEY BASELINE DATA

POINT	COORDINATES	
	NORTH	EAST
*12	699,603.509	2,131,951.524
*11	698,942.776	2,133,124.414
*10	698,365.136	2,134,026.555
"OR-1"	698,615.942	2,133,634.854
"POL-A"	698,693.627	2,133,964.548
"4+13.68"	698,710.823	2,134,037.529
"CL-3A"	698,503.386	2,134,582.775
"CL-3B"	698,331.764	2,134,515.761
"D-1"	698,829.846	2,133,938.742
"D-2"	698,808.058	2,133,814.639
"C"	698,819.082	2,133,693.486

SCALE : 1"=100'

State Of New Jersey
Department Of Transportation
ALIGNMENT
ROUTE 280 SECTION 7-D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

10
132
133

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by P.Mitrakos Traced by M.Athan Checked by R.A.Larsen

0731 010 133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - 1 - 280 - 6 (36) 60	11	~~132~~ 133

ALIGNMENT DATA

POINT	LINE	COORDINATES NORTH	COORDINATES EAST
P.O.C. "℄ 75" 3	Baseline Route 75	699, 349. 722	2, 131, 860. 170
P.C.C. "℄ 75 - 15-16"	" " " "	699, 014. 975	2, 132, 515. 129
P.C.C. "℄ 75 - 16-17"	" " " "	698, 954. 224	2, 132, 594. 557
P.T. "℄ 75 - 17"	" " " "	698, 892. 091	2, 132, 672. 911
P.C. "℄ 75 - 18"	" " " "	698, 667. 020	2, 132, 953. 845
P.O.C. "℄ 75" - 5	" " " "	698, 615. 657	2, 133, 019. 036
P.O.C. "℄ 75" - 6	" " " "	698, 610. 668	2, 133, 025. 486
P.C.C. "WBM-14-15"	Route 75 West Median	699, 217. 825	2, 132, 212. 610
P.C.C. "WBM-15-16"	" " " "	699, 033. 712	2, 132, 505. 135
P.C.C. "WBM-16-17"	" " " "	698, 972. 341	2, 132, 584. 085
P.T. "WBM-17"	" " " "	698, 909. 597	2, 132, 661. 951
P.C. "WBM-18"	" " " "	698, 690. 878	2, 132, 930. 621
P.C.C. "EBM-14-15"	Route 75 East Median	699, 071. 835	2, 132, 413. 657
P.C.C. "EBM-15-16"	" " " "	698, 902. 451	2, 132, 648. 948
P.T. " EBM-16"	" " " "	698, 847. 290	2, 132, 719. 341
P.C. " EBM-18"	" " " "	698, 635. 476	2, 132, 987. 169
P.T. " 280 WB-7"	Route 280 Westbound	699, 234. 540	2, 132, 375. 164
P.C. " 280 WB-8"	" " "	699, 225. 915	2, 132, 391. 820
P.C.C. "280 WB-8-9"	" " "	699, 180. 378	2, 132, 480. 849
P.C.C. " 280 WB-9-10"	" " "	699, 145. 020	2, 132, 552. 611
P.C.C. " 280 WB-10-11"	" " "	699, 096. 038	2, 132, 662. 142
P.O.C. "280 WB"5	" " "	699, 028. 189	2, 132, 880. 068
P.C.C. "280 WB-11-12"	" " "	699, 021. 883	2, 132, 911. 574
P.C.C. "280 WB-12-13"	" " "	699, 009. 369	2, 132, 985. 519
P.C.C. "280 WB-13-14"	" " "	698, 998. 812	2, 133, 059. 771
P.T. "280 WB-14"	" " "	698, 989. 230	2, 133, 134. 156
P.C. "280 WB15"	" " "	698, 988. 666	2, 133, 138. 672
P.C.C. " 280 WB-15-16"	" " "	698, 979. 084	2, 133, 213. 057
P.C.C. " 280 WB-16-17"	" " "	698, 968. 527	2, 133, 287. 310
P.C.C. "280 WB-17-18"	" " "	698, 956. 013	2, 133, 361. 254
P.C.C. "280 WB-18-19"	" " "	698, 899. 317	2, 133, 564. 088
P.O.C. "280 WB"6	" " "	698, 888. 318	2, 133, 592. 669
P.C.C. "280 WB-19-20"	" " "	698, 871. 676	2, 133, 633. 805
P.C.C. "280 WB-20-21"	" " "	698, 842. 201	2, 133, 702. 769
P.T. "280 WB-21"	" " "	698, 811. 823	2, 133, 771. 341
P.C. "280 WB-22"	" " "	698, 625. 624	2, 134, 198. 605
P.C.C. " 280 WB-4-5"	" " "	699, 364. 417	2, 132, 104. 842
P.C.C. "280 WB-5-6"	" " "	699, 315. 434	2, 132, 214. 373
P.C.C. "280 WB-6-7"	" " "	699, 280. 077	2, 132, 286. 135
P.C. " 280 EB-6"	Route 280 Eastbound	699, 104. 285	2, 132. 031. 050
P.C.C. " 280 EB-6-7"	" " "	699, 096. 732	2, 132, 121. 067
P.C.C. " 280 EB-7-8"	" " "	699, 062. 974	2, 132, 193. 595
P.C.C. " 280 EB-8-9"	" " "	699, 016. 431	2, 132, 304. 185
P.C.C. " 280 EB-9-10"	" " "	698, 941. 728	2, 132, 610. 147
P.O.C. " 280 EB" 4	" " "	698, 941. 690	2, 132, 610. 493
P.C.C. " 280 EB-10-11"	" " "	698, 932. 069	2, 132, 729. 743
P.C.C. " 280 EB-11-12"	" " "	698, 928. 604	2, 132, 809. 667
P.T. " 280 EB-12"	" " "	698, 925. 773	2, 132, 909. 626
P.C. " 280 EB-13"	" " "	698, 924. 713	2, 132, 955. 089
P.C.C. " 280 EB-13-14"	" " "	698, 921. 881	2, 133, 055. 049
P.C.C. " 280 EB-14-15"	" " "	698, 918. 417	2, 133, 134. 973
P.O.C. "280 EB" 6	" " "	698, 915. 262	2, 133, 183. 847
P.C.C. " 280 EB-15-16"	" " "	698, 908. 757	2, 133, 254. 568
P.C.C. " 280 EB-16-17"	" " "	698, 848. 977	2, 133, 520. 039
P.C.C. " 280 EB-17-18"	" " "	698, 806. 441	2, 133, 632. 231
P.C.C. " 280 EB-18-19"	" " "	698, 775. 312	2, 133, 705. 925
P.T. " 280 EB-19"	" " "	698, 735. 024	2, 133, 797. 450
P.C. " 280 EB-20"	" " "	698, 577. 725	2, 134, 150. 005
P.C. " A-1"	Ramp " A"	699, 197. 807	2, 132, 659. 036
P.C.C. " A-1-2"	" "	699, 100. 372	2, 132, 661. 853
P.O.C. "A" 1	" "	699, 095. 153	2, 132, 664. 280
P.C.C. "A-2-3"	" "	699, 029. 150	2, 132, 701. 803
P.O.C. "A" 2	" "	698, 929. 938	2, 132, 774. 346
P.C.C. "A-3"	" "	698, 656. 772	2, 133, 050. 889

POINT	LINE	COORDINATES NORTH	COORDINATES EAST
P.T. " B-1"	Ramp "B"	699, 435. 305	2, 132, 124. 417
P.C. "B-2"	" "	699, 163. 299	2, 132, 373. 913
P.C.C. "B-2"	" "	699, 040. 902	2, 132, 882. 783
P.C. "C-1"	Ramp "C"	698, 987. 774	2, 132, 179. 953
P.T. " C-1"	" "	698, 903. 233	2, 132, 392. 676
P.O.T. "C"1	" "	698, 896. 337	2, 132, 449. 338
P.O.T. "C"2	" "	698, 874. 498	2, 132, 446. 680
P.C. "C-2"	" "	698, 870. 411	2, 132, 480. 259
P.C.C. "C 2-3"	" "	698, 795. 380	2, 132, 689. 110
P.T. " C-3"	" "	698, 689. 295	2, 132, 839. 390
P.O.T. "C"3	" "	698, 569. 417	2, 132, 993. 631
P.C. " D-1"	Ramp "D"	699, 122. 774	2, 132, 022. 470
P.C.C. " D-1-2"	" "	699, 079. 136	2, 132, 112. 663
P.C.C. " D-2-3"	" "	699, 045. 214	2, 132, 185. 544
P.O.C. "D"2	" "	699, 017. 617	2, 132, 249. 031
P.O.C. " D" 3	" "	698, 997. 307	2, 132, 240. 577
P.C.C. " D-4-5"	" "	698, 982. 537	2, 132, 276. 953
P.C.C. " D-5-6"	" "	698, 930. 941	2, 132, 486. 091
P.T. " D-6"	" "	698, 910. 785	2, 132, 818. 255
P.C. " D-7"	" "	698, 906. 598	2, 133, 109. 572
P.T. " D-7"	" "	698, 903. 296	2, 133, 182. 941
P.C. " D-8"	" "	698, 894. 217	2, 133, 302. 837
P.T. " D-8"	" "	698, 848. 977	2, 133, 520. 039
P.O.T. "E" 1	Ramp "E"	698, 900. 418	2, 133, 597. 422
P.C. "E" 1	" "	698, 728. 309	2, 134, 035. 498
P.C. " B1-3"	Ramp " B1"	699, 460. 232	2, 132, 205. 861
P.C.C. "B1-3-4"	" "	699, 424. 949	2, 132, 205. 465
P.T. "B1-4"	" "	699, 347. 969	2, 132, 268. 743

CURVE DATA

CURVE	Δ	R	L	T	E	COORDINATES OF CENTER NORTH	COORDINATES OF CENTER EAST
EB-6	0° 34' 23"	10, 000'	100. 00'	50. 00'	0.13'	708, 120. 134	2, 136, 431. 313
EB-7	1° 08' 45"	4, 000'	80. 00'	40. 00'	0.20'	702, 706. 093	2, 133, 845. 166
EB-8	3° 07' 31"	2, 200'	120. 00'	60. 02'	0.82'	701, 066. 689	2, 133, 101. 959
EB-9	15° 04' 52"	1, 200'	315. 86'	158. 85'	10.47'	700, 134. 754	2, 132, 739. 334
EB-10	3° 07' 31"	2, 200'	120. 00'	60. 02'	0.82'	701, 128. 942	2, 132, 846. 990
EB-11	1° 08' 45"	4, 000'	80. 00'	40. 00'	0.20'	702, 926. 384	2, 132, 942. 920
EB-12	0° 34' 23"	10, 000'	100. 00'	50. 00'	0.13'	708, 923. 054	2, 133, 142. 800
EB-13	0° 34' 23"	10, 000'	100. 00'	50. 00'	0.13'	688, 927. 131	2, 132, 721. 915
EB-14	1° 08' 45"	4, 000'	80. 00'	40. 00'	0.20'	694, 924. 101	2, 132, 921. 796
EB-15	3° 07' 31"	2, 200'	120. 00'	60. 02'	0.82'	696, 721. 543	2, 133, 017. 725
EB-16	13° 01' 14"	1, 200'	272. 70'	136. 94'	7.79'	697, 715. 731	2, 133, 125. 381
EB-17	3° 07' 31"	2, 200'	120. 00'	60. 02'	0.82'	696, 771. 360	2, 132, 796. 500
EB-18	1° 08' 45"	4, 000'	80. 00'	40. 00'	0.20'	695, 106. 294	2, 132, 112. 720
EB-19	0° 34' 23"	10, 000'	100. 00'	50. 00'	0.13'	689, 602. 767	2, 129, 722. 911
A-1	45° 53' 49"	125'	100. 13'	52. 93'	10.74'	699, 152. 416	2, 132, 775. 503
A-2	9° 22' 05"	500'	81. 75'	40. 97'	1.68'	699, 308. 550	2, 133, 115. 454
A-3	18° 21' 23"	1, 600'	512. 61'	258. 52'	20.75'	699, 923. 229	2, 134, 028. 687
B-1	11° 06' 12"	1, 000'	193. 79'	97. 2[illegible]	.1'	698, 579. 755	2, 131, 606. 696
B-2	19° 07' 28"	1, 000'	333. 78'	168. 46'	14. 09'	700, 018. 849	2, 133, 091. 634
B1-3	41° 19' 25"	50'	36. 06'	18. 86'	3.44'	699, 442. 066	2, 132, 252. 444
B1-4	38° 48' 02"	150'	101. 58'	52. 82'	9.03'	699, 476. 301	2, 132, 346. 401
C-1	29° 28' 08"	450'	231. 45'	118. 35'	15. 30'	699, 349. 937	2, 132. 447. 044
C-2	25° 38' 38"	500'	223. 78'	113. 80'	12. 79'	698, 374. 074	2, 132. 419. 850
C-3	5° 16' 17"	2, 000'	184. 01'	92. 07'	2. 12'	697, 110. 156	2, 131. 612. 067
D-1	0° 34' 23"	10, 019. 5'	100. 20'	50. 10'	0.13'	708, 120. 134	2, 136, 431. 313
D-2	1° 08' 45"	4, 019. 5'	80. 39'	40. 20'	0.20'	702, 706. 093	2, 133, 845. 166
D-3	1° 47' 14"	2, 219. 5'	69. 23'	34. 62'	0.27'	701, 066. 689	2, 133, 101. 959
D-4	1° 00' 13"	2, 241. 5'	39. 26'	19. 63'	0.09'	701, 066. 689	2, 133, 101. 959
D-5	15° 28' 28"	800'	216. 06'	108. 69'	7. 35'	699, 725. 379	2, 132, 571. 401
D-6	5° 17' 53"	3, 600'	332. 89'	166. 57'	3. 85'	702, 510. 413	2, 132, 869. 985
D-7	3° 30' 26"	1, 200'	73. 45'	36. 74'	0.56'	697, 706. 722	2, 133, 092. 329
D-8	14° 52' 13"	857. 25'	222. 49'	111. 87'	7. 27'	698, 039. 417	2, 133, 238. 106

CURVE DATA

CURVE	Δ	R	L	T	E	COORDINATES OF CENTER NORTH	COORDINATES OF CENTER EAST
15	26° 37' 51"	2, 200'	1022. 56'	520. 69'	60. 78'	697, 250. 946	2, 131, 200. 518
16	1° 25' 57"	4, 000'	100. 00'	50. 00'	0.31'	695, 807. 649	2, 130, 124. 928
17	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	691, 087. 787	2, 126, 420. 485
WBM-15	9° 54' 51"	2, 000'	346. 07'	173. 47'	7. 51'	697, 439. 453	2, 131, 297. 518
WBM-16	1° 25' 57"	4, 000'	100. 00'	50. 00'	0. 31'	695, 845. 195	2, 130, 089. 901
WBM-17	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	691, 154. 475	2, 126, 348. 624
EBM-15	4° 09' 13"	4, 000'	289. 98'	145. 05'	2. 63'	695, 742. 970	2, 130, 195. 853
EBM-16	0° 30' 45"	10, 000'	89. 43'	44. 72'	0. 10'	691, 003. 749	2, 126, 516. 209
WB-5	3° 07' 31"	2, 200'	120. 00'	60. 02'	0. 82'	697, 332. 347	2, 131, 261. 817
WB-6	1° 08' 45"	4, 000'	80. 00'	40. 00'	0. 20'	695, 709. 821	2, 130, 482. 453
WB-7	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	690, 354. 436	2, 127, 776. 930
WB-8	0° 34' 23"	10, 000'	100. 00'	50. 00'	0. 13'	708, 106. 019	2, 136, 990. 054
WB-9	1° 08' 45"	4, 000'	80. 00'	40. 00'	0. 20'	702, 750. 634	2, 134, 284. 531
WB-10	3° 07' 31"	2, 200'	120. 00'	60. 02'	0. 82'	701, 128. 108	2, 133, 505. 167
WB-11	11° 56' 58"	1, 250'	260. 69'	130. 82'	6. 83'	700, 250. 623	2, 133, 141. 132
WB-12	1° 57' 12"	2, 200'	75. 00'	37. 50'	0. 32'	701, 184. 466	2, 133, 315. 598
WB-13	1° 04' 27"	4, 000'	75. 00'	37. 50'	0. 18'	702, 964. 091	2, 133, 585. 663
WB-14	0° 25' 47"	10, 000'	75. 00'	37. 50'	0. 07'	708, 912. 010	2, 134, 374. 501
WB-15	0° 25' 47"	10, 000'	75. 00'	37. 50'	0. 07'	689, 065, 887	2, 131, 898. 328
WB-16	1° 04' 27"	4, 000'	75. 00'	37. 50'	0. 18'	695, 013. 805	2, 132, 687. 166
WB-17	1° 57' 12"	2, 200'	75. 00'	37. 50'	0. 32'	696, 793. 430	2, 132, 957. 230
WB-18	10° 04' 08"	1, 200'	210. 88'	105. 71'	4. 65'	697, 776. 422	2, 133, 140. 878
WB-19	1° 57' 12"	2, 200'	75. 00'	37. 50'	0. 32'	696, 840. 677	2, 132, 788. 202
WB-20	1° 04' 27"	4, 000'	75. 00'	37. 50'	0. 18'	695, 173. 951	2, 132, 096. 345
WB-21	0° 25' 47"	10, 000'	75. 00'	37. 50'	0. 07'	689, 684. 075	2, 129, 686. 709

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by P. Whitakes Traced by M. Athan Checked by R. A. Lorsen

State Of New Jersey
Department Of Transportation
ALIGNMENT
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

11
~~132~~
133

0731 012 133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - 1 - 280 - 6 (36) 60	14	~~132~~ 133

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Pavement Type "A-BC-2, 3" thick	S.Y.	33	33
Subbase, Type 1	C.Y.	70	0
Subbase, Type 5	C.Y.	57	0
Bituminous-Stabilized Base Course, 6" th.	S.Y.	320	0
Pavement Type FA-BC-1, 2" thick	S.Y.	320	0
Prime Coat	Gal.	56	See Total
Reset Existing Stone Curb	L.F.	150	150
9" × 20" White Concrete Vertical Curb	L.F.	264	0
Concrete Sidewalk, 4" thick	S.Y.	134	0
Beam Guard Rail	L.F.	138	0
Chain Link Fence, 5' High	L.F.	200	0
Concrete Base Course, 6" thick	S.Y.	33	33
Pavement Excavation	S.Y.	0	33.0

BENCH MARK

NAME	ELEV.	DESCRIPTION
"Cop"	143.634'	□ Cut in East End, 1st Step, at the Entrance to 5th Precinct Station S.W. Corner of 6th St. and Orange St. - Newark, N.J.

BEGIN PROJECT
BASELINE RTE. 280 E.B.
STA. 640 + 19.00

Proposed R.O.W. & Control of Access Line
Top of Slope By Others
Meet Exist. Curb
Meet Exist. Pav't.
Meet Exist. Curb
Const. 150 L.F. Reset Exist. Stone Curb
Const. 134 S.Y. Conc. Sidewalk, 4" th.
Const. 33 S.Y. Pav't. Type FA-BC-2, 3" th.
Const. 33 S.Y. Conc. Base Course, 6" th.
Const. 33 S.Y. Excav.
ORANGE ST.
15" TILE
Asphalt on Conc.
36" ϕ Water Mains By Others
Control of Access Line
Const. 240 L.F. Chain Link Fence, 5' High
Const. 264 S.Y. Pav't. Type FA-BC-2, 3" th.
Const. 264 S.Y. Conc. Base Course, 6" th.
Const. 264 L.F. 9" × 20" Wh. Conc. Vert. Curb
Top of Slope By Others
"B" 641
"B" 642
B-1
RAMP "B"
Const. 138 L.F. Beam Guard Rail
Const. 132 L.F. 9" × 20" Wh. Conc. Vert. Curb
"WB" 642
"WB" 641
RTE. 280 W.B.
Sta. 642+00
Match to Baseline Rte. 75
RTE. 75 N. To W.
RTE. 75 E. To S.
Bridges Not In Contract
"EB" 641
RTE. 280 E.B.
"EB" 640
"EB" 639
"EB" 638
"EB" 637
"WB" 640
"WB" 639
"WB" 638
"WB" 637
8' Drainage Tunnel (By Others)
Baseline Rte 75
COLLECTOR RD.
36" ϕ Water Main
21" R.C.S.P.
18" R.C.S.P.
24" R.C.C.P.
15" R.C.C.P.
12" R.C.C.P.
18" R.C.C.P.
15" C.M.C.P.
12" W.C.P.
12" V.C.P.
43" ϕ Water Main
8" W
6" W
Asphalt on Conc.
N.J. State Committee of Steelmen
Cop
E. 2,131,600
E. 2,131,800
E. 2,132,000
E. 2,132,200
E. 2,132,400
E. 2,131,400
E. 2,131,200
E. 2,131,600
E. 2,131,800
N. 699,600
N. 699,400
N. 699,200
N. 699,000

SCALE: 1" = 30'

LEGEND

- 639 — Center Line or Baseline
- Ruins or Foundation
- Wire, Wood or Stone Fence (Type)
- Fence on Retaining Wall
- Retaining Wall
- Railroad
- Guard Rail & Cable
- Guard Posts
- Steel Safety Rail
- Street Sign
- Traffic Sign
- Traffic Light
- Utility Pole
- Utility & Light Pole
- Light Pole
- Fire Hydrant
- Manhole
- C.B. Catch Basin
- Transformer on Pole
- Parking Meter
- Traffic Control Box
- Fire or Police Call Box
- Hedge
- Trees
- Tree Line
- Culvert
- Traverse Point
- Bench Mark
- Inlet
- Railroad Switch
- Drop Inlet

Bit.	Bituminous
Blo.	Block
Br.	Brick
Conc.	Concrete
Comm.	Commercial
Dwg.	Dwelling
El.	Elevation
Fr.	Frame
Gar.	Garage
Mtl.	Metal
Ret. Wall	Retaining Wall
Sto.	Stone
Stu.	Stucco
Sty.	Story

- W — Water Main (Size)
- G — Gas Main (Size)
- E — Electricity Conduit
- T — Telephone Conduit
- J.B. Existing / J.B. Proposed — Electricity Conduit, Highways (Junction Box)
- Reset / Flow / Existing / New or Reconst. Manhole / Proposed / Flow — Sanitary Sewer & Storm Drain (Size & Type) (Over 30" Drawn to Scale)
- Type — Existing / Proposed — Pavement
- Existing / Proposed — Shoulder
- Toe of Slope (F) / Top of Slope (C) — Slope
- Existing / Proposed — Property Line, Right of Way Line
- Control of Access Line
- Proposed Right of Way & Control of Access Line
- Size & Type — Existing / Proposed — Curb
- Curb Under Construction By Others
- Pavement Under Construction By Others
- Existing / Proposed — Standard Guard Rail
- Proposed Chain Link Fence
- Proposed or Reset Inlet
- Flow — Existing / Flow — Proposed — Ditch
- Traffic Flow (Future)
- Concrete Surface Pav't. Reinforced, 9" thick

State Of New Jersey
Department Of Transportation
PLAN SHEETS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

14
~~132~~ 133

Made by S. Larsen Traced by M. Ahern Checked by C. Koch

0731 014 133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N.J. - I - 280 - 6 (36) 60	15	132

BENCH MARK

NAME	ELEV.	DESCRIPTION
#446 ORANGE	137.705'	□ Cut in East End of 1st Stone Step at Upstairs Entrance to House #446, Orange St - Newark, N.J.

BEGIN FEDERAL PROJECT NO. N.J.-I-280-6(36) 60
BASELINE ROUTE 280
E.B. STA. 643 + 16.00

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITES	AS BUILT QUANTITIES
Subbase, Type 1	C.Y.	4,721	4128
Subbase, Type 5	C.Y.	838	560
Subgrade	S.Y.	7,542	5,749
Concrete Base Course, 6" thick	S.Y.	202	226
Bituminous-Stabilized Base Course, 6" th.	S.Y.	3,095	2,026
Bituminous-Stabilized Base Course, 4" th.	S.Y.	3,603	2,312
Pavement Type FA-BC-2, 3" thick	S.Y.	202	226
Prime Coat	Gal.	1,172	See Total
Pavement Type FA-BC-1, 2" thick	S.Y.	6,698	4,338
Concrete Surface Pavement, Reinforced, 9" th.	S.Y.	6,755	4,777
Bridge Approach Transition Slabs, 13½" Av. th.	S.Y.	483	469
Bridge Approach Slab, 18" thick	S.Y.	304	303
Transverse Expansion Joints - Type A	L.F.	778	841
Reset Existing Stone Curb	L.F.	647	592
9"x 20" White Concrete Vertical Curb	L.F.	4,235	3109
15"x 4.1" White Concrete Barrier Curb	L.F.	1,755	1312
White Concrete Island Pavement, 4" thick	S.Y.	208	0
Concrete Gutter, 6" thick	S.Y.	271	257
Concrete Sidewalk, 4" thick	S.Y.	1,276	960
Pavement Excavation	S.Y.	511	540
Beam Guard Rail	L.F.	1,075	990
Chain Link Fence, 5' High	L.F.	1,140	1050
Wood Barricade, Type A	L.F.	32	32
9" x 8" White Concrete Vertical Curb, Doweled	L.F.	44	32
Porous Fill	C.Y.	3,668	3,602
Bituminous Treated Stone Slope Protection, 4" th.	S.Y.	732	213
Temporary Chain Link Fence, 5' High	L.F.	See Total	127
White Conc. Island Pav't, 4" th (Revised Spec.)	S.Y.	208	152

SA #16

LEGEND

- ● 11-7 Location of Boring
- Bridge Approach Transition Slab, 13½" Avg. th.
- Bridge Approach Slab, 18" th.
- Concrete Surface Pavement, Reinforced, 9" th.
- Pavement Excavation

SCALE: 1" = 30'

State Of New Jersey
Department Of Transportation
PLAN SHEETS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

15/132

Made by R. Larsen Traced by Mt. Athan Checked by C. Koch

0731 015 133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (36) 60	16	132 / 133

BENCH MARK

NAME	ELEV.	DESCRIPTION
"ESSO"	130.773	x Cut on N.W. Bolt of Hydrant, located at S.E. Corner of 2nd St. and Orange St. - Newark, N.J.

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
SA 16 White Conc. Island Pavt., 4"th. (Revised Spec.)	S.Y.	15	10
Subbase Type 1	C.Y.	950	833
Subbase Type 5	C.Y.	115	116
Subgrade	S.Y.	1605	1,667
Concrete Base Course, 6" thick	S.Y.	245	139
Bituminous-Stabilized Base Course, 4" thick	S.Y.	674	627
Bituminous-Stabilized Base Course, 6" thick	S.Y.	328	308
Class "C" Concrete		0	0.8
Prime Coat	Gal.	176	See Total
Pavement Type FA-BC-2, 3" thick	S.Y.	245	139
Pavement Type FA-BC-1, 2" thick	S.Y.	1002	935
Concrete Surface Pavement, Reinforced, 9" Th.	S.Y.	1605	1604.
Transverse Expansion Joints - Type A	L.F.	185	273
9"x20" White Concrete Vertical Curb	L.F.	648	689.3
15"x41" White Concrete Barrier Curb	L.F.	104	79
24"x41" White Concrete Barrier Curb	L.F.	98	103
Concrete Sidewalk, 4" thick	S.Y.	774	804
Concrete Sidewalk, 6" thick	S.Y.	49	20
White Concrete Island Pavement, 4" thick	S.Y.	25	10
Reset Existing Stone Curb	L.F.	637	466
Pavement Excavation	S.Y.	225	359
Beam Guard Rail	L.F.	374	339
Chain Link Fence, 5' High	L.F.	746	1079
Roadway Excavation, Unclassified	C.Y.	890	2,499
Bridge Foundation Borrow Excavation	C.Y.	570	1,229
Chain Link Fence, 6' High	L.F.	36	37
Bituminous Treated Stone Slope Protection, 4" Th.	S.Y.	5,113	5,123
SA 14 Chain Link Fence Double Swing Gate 12'-0" Wide x 5'-0" High	Unit	1	1
Earth Excavation For Test Pits	C.Y.	See Total	23.75

LEGEND

- ● 13-9 Location of Boring
- Pavement Excavation
- Concrete Surface Pav't, Reinforced, 9" Thick
- Temporary Sheeting
- Permanent Sheeting

NOTE:
For Cross Sections see Sheets No 80 to 85

SCALE: 1" = 30'

State Of New Jersey
Department Of Transportation
PLAN SHEETS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

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0731 016 133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (36) 60	17	132
				133

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Chain Link Fence, 5' High	L.F.	110	0
Bituminous-Treated Stone Slope Protection, 4"Th.	S.Y.	990	923
Demolition of Vehicular Parking Deck	L.S.	Lump Sum	100%

BENCH MARK		
NAME	ELEV.	DESCRIPTION
"Heck-Hydr."	125.721'	x Cut on Northerly Bolt of Hydrant, Located on S.W. Corner of Orange St. and Hecker St.-Newark, N.J.

END FEDERAL PROJECT NO. N.J.-I-280
BASELINE ROUTE 280 E.B. 656 + 55.96

END PROJECT
BASELINE ROUTE 280 E.B. STA. 657 + 00.00

Change of plan to relocate rail fencing as shown. Signed by [illegible] 1-13-58

LEGEND
●13-38 Location of Boring

NOTE:
For Cross Sections See Sheets No. 87 ... 187

SCALE: 1" = 30'

State Of New Jersey
Department Of Transportation
PLAN SHEETS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

17/132

Drawn by R. Abel ... Traced by M. Athan ... Checked by R. Larsen

0731 017 133

SCALE : HOR. 1"=50'
VERT. 1"=10'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 200 - 6 (36) 60	29	~~132~~ 133

By Others

Rte. 280 Eastbound Viaduct to be Constructed under this Contract
℄ Rte. 75 Sta. 648+56.03
℄ Rte. 280 E.B. Sta. 648+27.98

5th St. 4th St. 3rd St. 2nd St. 1st St.

Grading Line Rte. 75 E.B. -1.737%
-0.763%
Grading Line Rte. 75 W.B.
Existing Ground Line
Prop. Rte. 75 E.B. Profile Line
Prop. Rte. 75 W.B. Profile Line
Proposed Profile Line
Profile Future Pavement
+2.67%
Grading Line
Cap
City Railway Public Service

2'-3" 1'-9" 1'-9" 1'-9"

24" R.C.C.P. 18" R.C.C.P. 36" R.C.C.P. 15" R.C.C.P. 21" R.C.C.P. 24" R.C.C.P.
Meet Exist. 24" R.C.C.P. Stub

P.V.C. - Rte. 75 W.B. P.V.C. - Rte. 75 E.B. P.V.I. - Rte. 75 W.B. P.V.I. - Rte. 75 E.B. P.V.T. - Rte. 75 W.B. P.V.T. - Rte. 75 E.B.

Inlet to Drainage Tunnel

Profile – Route 75 Eastbound
V.C. = 310' K = 1.708' P.V.I. Elev. = 123.26'

Profile – Route 75 Westbound
V.C. = 270' K = 1.159' P.V.I. Elev. = 121.13

8' Diameter Drainage Tunnel (By Others)

DATUM = 20'

	640	+50	641	+50	642	+50	+60	643	+35	+50	644	+15	+50	+70	645	+70	646	+50	647	+50	648	+50	649	+60	650	+50	651	+25	+50	652	+50	653	+50	654	+50	655	+50	656
Existing Ground Elev.	130.47		129.60		127.87			127.00			125.37				125.88		127.40		129.54		130.87		132.21		133.54		134.88		136.21		137.55		138.88		140.22			
Prop. Rte. 75 E.B. Profile Elev.	123.68		123.30		122.54			122.16			122.03				124.22		128.20		136.6		136.0		133.8		142.0		141.8		138.0		132.0		131.6		132.8		132.0	
Prop. Rte. 75 W.B. Profile Elev.	151.1		129.60		127.87			127.00			125.37				125.88		127.40		129.54		130.87		132.21		133.54		134.88		136.21		137.55		138.88		140.22		130.0
Prop. Rte. 75 E.B. Profile Elev.	151.2		149.5		148.0			146.2			141.5				138.5		137.0		136.6		136.0		133.8		142.0		141.8		138.0		132.0		131.6		132.8		129.0
Existing Ground Elev.	151.2		149.5		148.0			146.2			141.5				138.5		137.0		136.6		136.0		133.8		142.0		141.8		138.0		132.0		131.6		132.8		129.0
	123.68		123.30		122.54			122.16			122.03				124.22		128.20		136.6		136.0		133.8		142.0		141.8		138.0		132.0		131.6		132.8		132.0	
	140.7		126.13		125.96			141.2			124.97				124.97		127.40		129.54		130.87		132.21		133.54		134.88		136.21		137.55		138.88		140.22		130.0
	121.93		125.96		122.44			122.29			124.92				124.97		126.90		129.54		130.87		132.21		133.54		134.88		136.21		137.55		138.88		140.22		130.0
	140.7		126.13		125.96			141.2			124.97				124.97		127.40		129.54		130.87		132.21		133.54		134.88		136.21		137.55		138.88		140.22		130.0
	121.93		125.96		122.44			122.29			124.92				124.97		126.90		129.54		130.87		132.21		133.54		134.88		136.21		137.55		138.88		140.22		130.0
	123.68		123.30		122.54			122.16			122.03				124.22		128.20		136.6		136.0		133.8		142.0		141.8		138.0		132.0		131.6		132.8		132.0	
	123.68		123.30		122.54			122.16			122.03				124.22		128.20		136.6		136.0		133.8		142.0		141.8		138.0		132.0		131.6		132.8		132.0	

Profiles Route 75 Eastbound & Route 75 Westbound

PROFILE – ROUTE 75

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by R.A. Larsen Traced by M. Athan Checked by C.W. Koch

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

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073 029 133

SCALE: HOR. 1"=50'
VERT. 1"=10'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (36) 60	30	132
			133	

Rte. 280 E.B. Viaduct
℄ Rte. 280 E.B. Sta. 648+27.98=
℄ Rte. 75 Sta. 648+56.03

Rte. 280 E.B. Viaduct
℄ Rte. 280 E.B. Sta. 649+92.33=
Ramp "A" Sta. 649+89.27

Rte. 280 Eastbound Viaduct to be Constructed under this Contract

6th St. Bridge
℄ Rte. 280 EB Sta. 639+62.45=
℄ 6th St. Sta. 11+14.92

6th St.

Bridge Not In Contract

By Others

5th St.

4th St.

+5.0%

-5.4%

Proposed Profile Line

15" R.C.C.P.

2'-3"

1'-9"

15" C.M.P.

15" C.M.C.P.

Exist. Ground Line

Grading Line

Porous Fill

3rd St.

Rte. 75 E.B.

Rte. 75 W.B.

Pier 1

Pier 2

Ramp "A"

Pier 3

Pier 4

Pier 5

Pier 6

2nd St.

1st St.

Orange St.

Foundation Excavation

Bridge Foundation Borrow Excavation

Foundation Excavation & Bridge Foundation Borrow Excavation

V.C.=520' K=4.745' P.V.I. Elev. = 124.00'

V.C.=950' K=12.350' P.V.I. Elev. = 176.00'

P.V.I. P.V.T. P.V.C. P.V.I.

DATUM= 40'

Sta.	Existing Ground Elev.	Proposed Profile Elev.
639	139.0	128.53
+50	135.8	128.15
640	136.0	128.13
+50	134.8	128.45
+75	128.75	
641	146.5	129.13
+50	145.0	130.15
642	141.9	131.53
+50	142.0	133.26
643	142.0	135.34
+35	141.5	137.00
+50		137.75
644	140.6	140.25
+50	137.8	142.75
645	138.1	145.25
+50	138.0	147.75
646	137.5	150.25
+40	136.3	152.25
+50		152.74
647	133.9	155.05
+50	141.4	157.09
648	143.0	158.85
+50	139.3	160.34
649	134.4	161.55
+50	130.6	162.49
650	131.7	163.16
+50	132.3	163.55
651	130.3	163.67
+15		163.65
+50	128.1	163.51
652	127.4	163.08
+50	126.0	162.38
653	124.0	161.41
+50	123.8	160.16
654	122.7	158.63
+50	122.6	156.84
655	122.5	154.77

Existing Ground Elev. — Proposed Profile Elev.

PROFILE – ROUTE 280 EASTBOUND

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

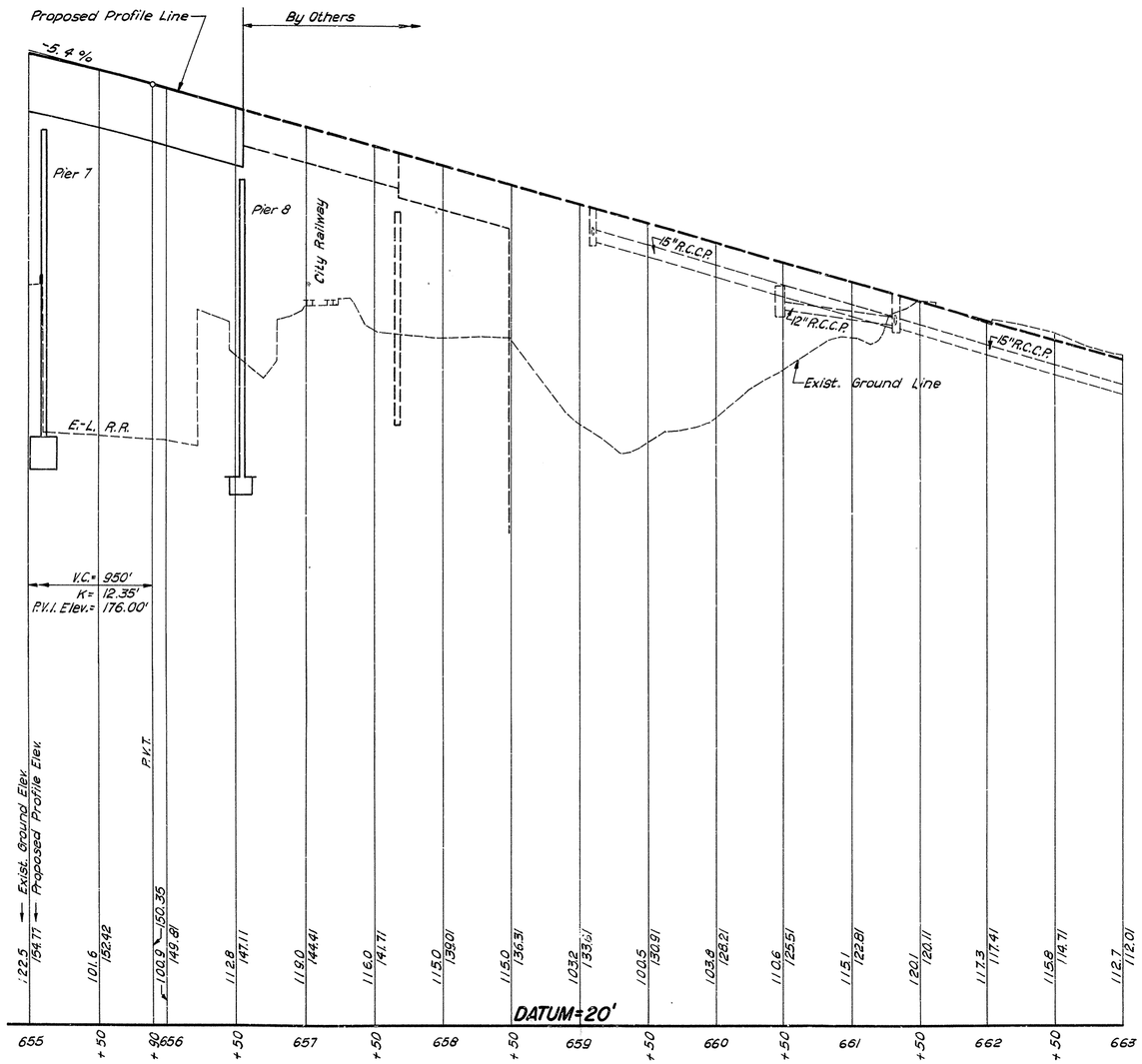
30
132
133

Made by R.A. Larsen Traced by M. Athan Checked by C.W. Koch

073 | 030 | 133

SCALE : HOR. 1"=50'
VERT. 1"=10'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (36) 60	31	132 / 133



PROFILE - ROUTE 280 EASTBOUND

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by R. Lorenz Traced by V. Kappauf Checked by C. Koch

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

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SCALE: HOR. 1"= 50'
VERT. 1"=10'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (36) 60	32	132

133

℄ Rte. 280 W.B. Sta. 648+60.73 =
Ramp "A" Sta. 647+90.31

6th St. Bridge
℄ Rte. 280 W.B. Sta. 640+27.52 =
℄ 6th St. Sta. 9+06.30

By Others

6th St.

Bridge Not In Contract

5th St.

4th St.

Proposed Profile Line

+4.705%

Rte. 280 Eastbound Viaduct to be Constructed under this Contract

-5.5%

15" C.M.C.P.
15" C.M.C.P. Elbow

Porous Fill

Pier 1 | Pier 2 | Pier 3 | Pier 4 | Pier 5 | Pier 6

2nd St.

3rd St.

Exist. Ground Line

Orange St.

Erie-Lackawanna Railroad

-0.585%

15" R.C.C.P.
15" R.C.C.P.
15" C.M.C.P.
15" R.C.C.P.
Grading Line
2'-3"
1'-9"
15" R.C.C.P.
18" R.C.C.P.
Meet Exist. 15" R.C.C.P. Stub
15" R.C.C.P.

P.V.C. | P.V.I. | P.V.T.

V.C.=380' | K=2.513' | P.V.I. Elev.=125.67'

P.V.C. | P.V.I.

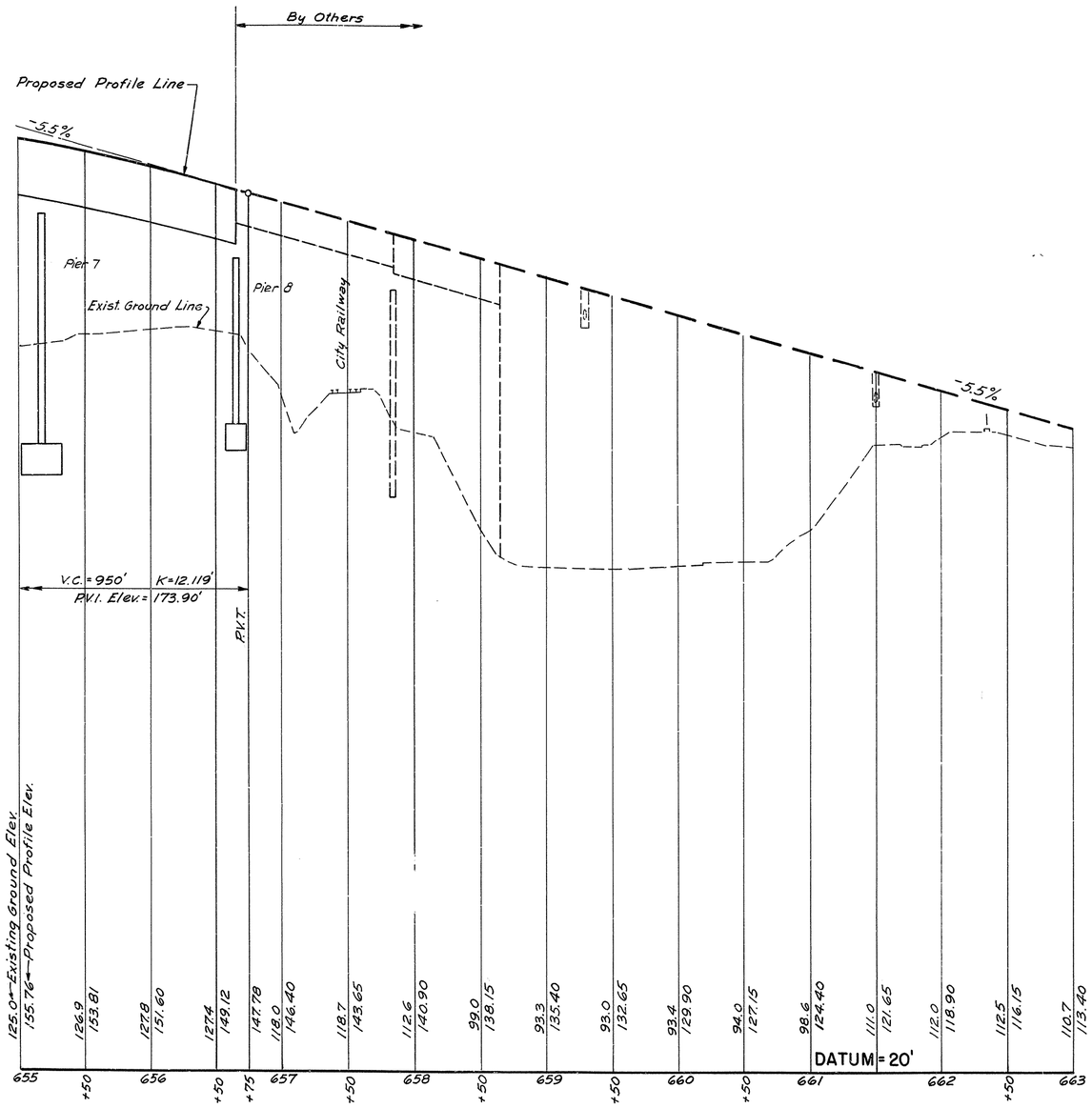
V.C.=950' | K=12.119' | P.V.I. Elev.=173.90'

| | | |

SCALE: HOR. 1"=50'
VERT. 1"=10'

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (36) 60	33	132

133



PROFILE – ROUTE 280 WESTBOUND

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by R. Larsen Traced by M. Bannwart Checked by C. Keck

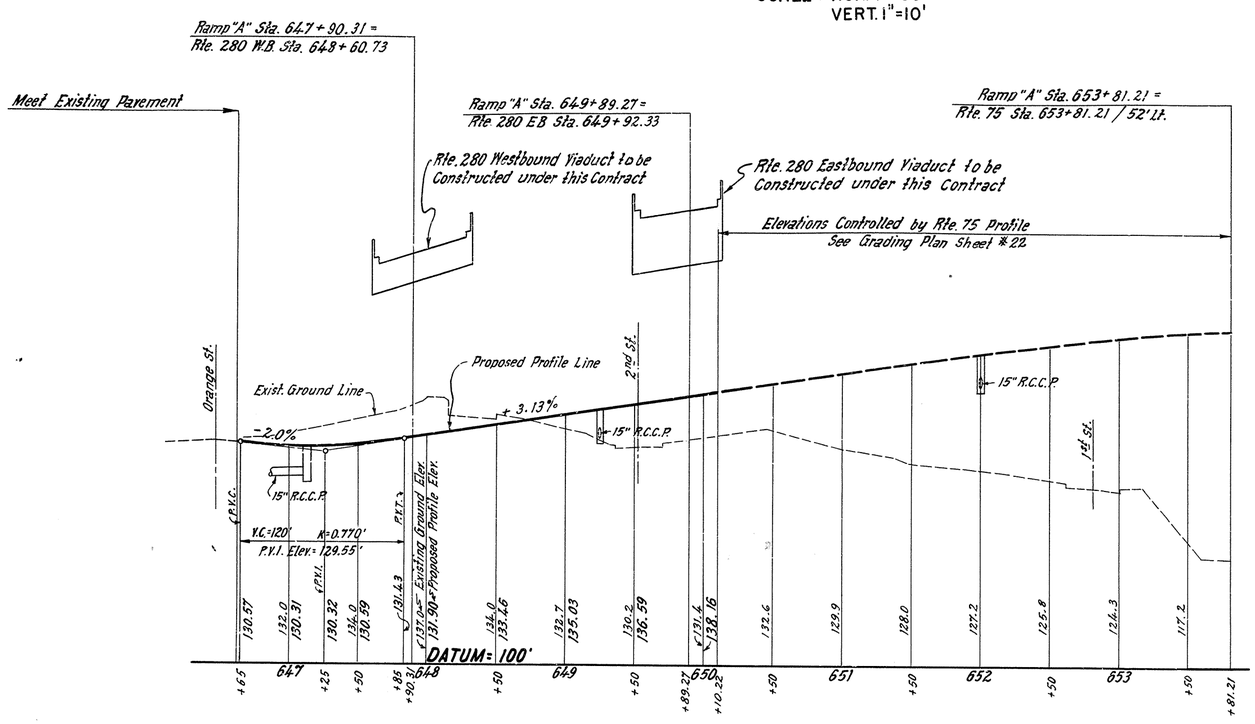
State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

33/132/133

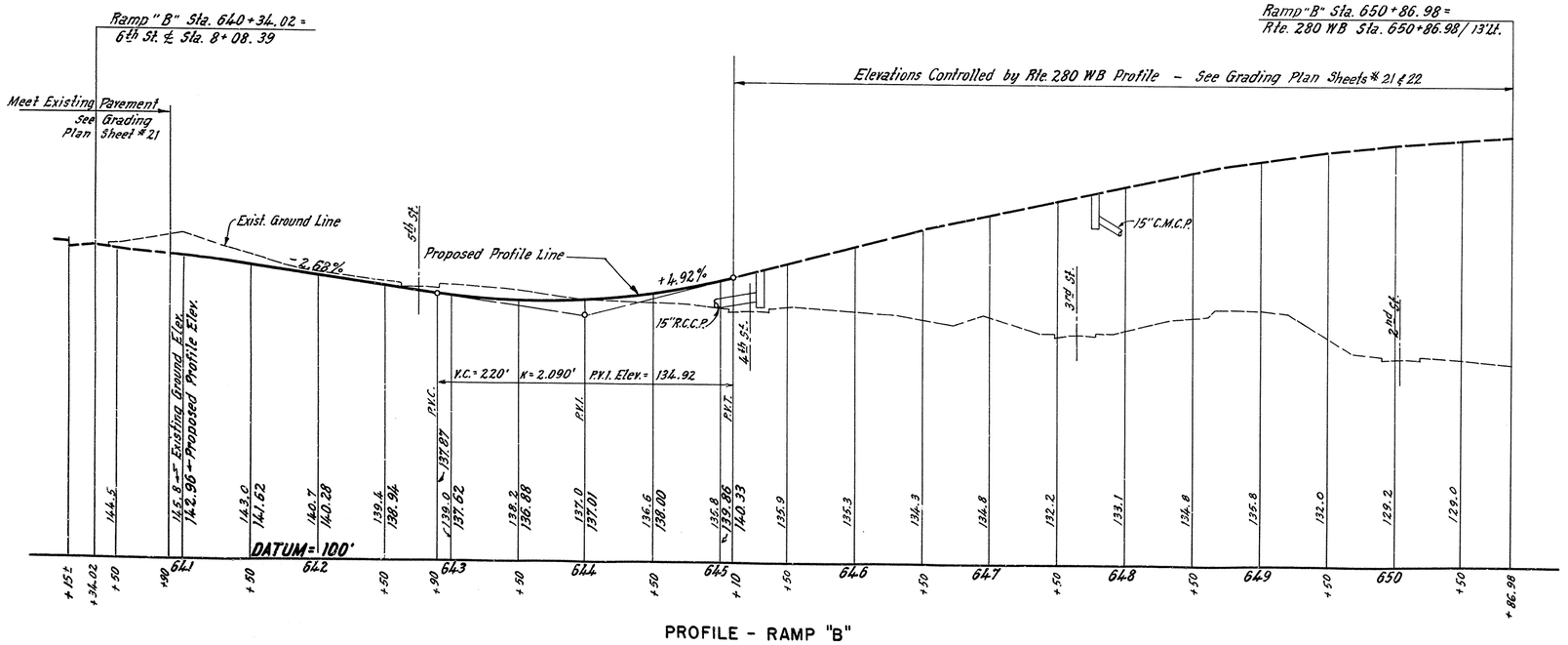
0731 033 133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - 1 - 280 - 6 (36) 60	34	132
				133

SCALE : HOR. 1"= 50'
VERT. 1"=10'



PROFILE – RAMP "A"



PROFILE – RAMP "B"

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

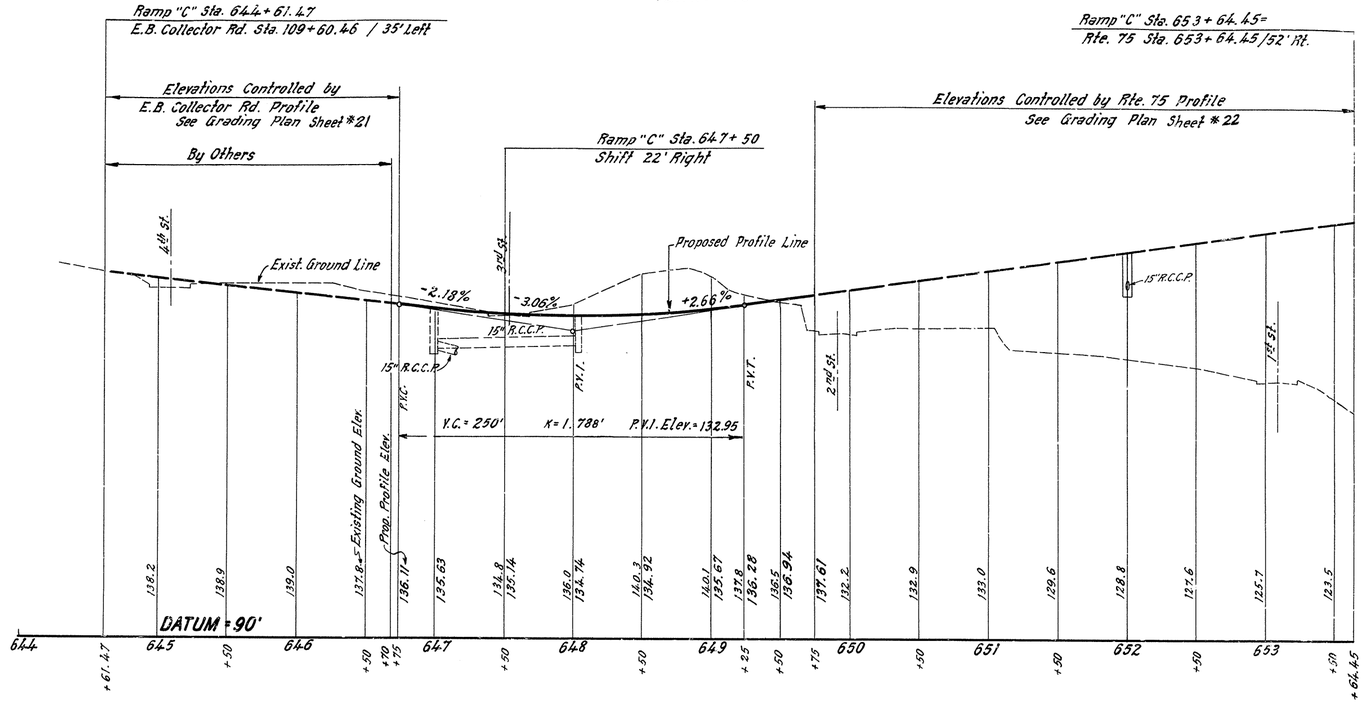
34
132
133

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Made by R.A.Larsen Traced by M.Arhon Checked by C.W.Koch

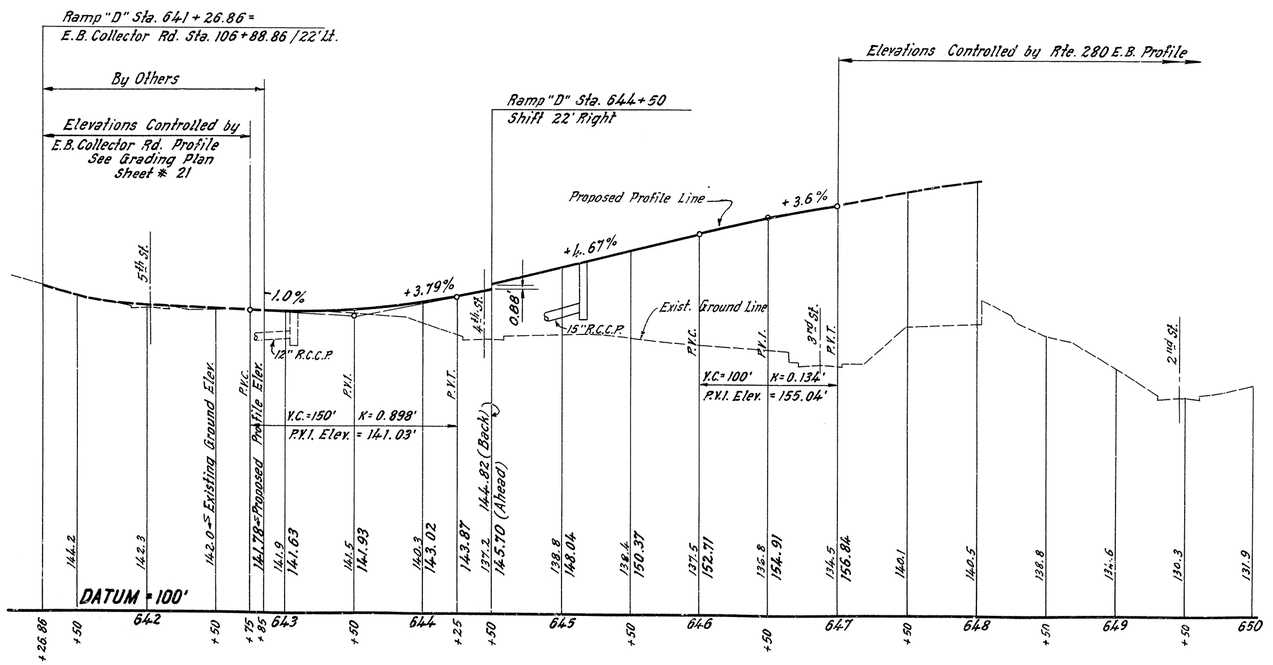
073 034 133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - 1 - 280 - 6 (36) 60	35	132
				133

SCALE: HOR. 1" = 50'
VERT. 1" = 10'



PROFILE - RAMP "C"



PROFILE - RAMP "D"

State Of New Jersey
Department Of Transportation
PROFILES

ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

35
132
133

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by R.A. Larsen Traced by M. Athan Checked by C.W. Koch

0731 035 133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N.J. - I - 280 - 6 (36) 60	18	132

133

		TO BE CONSTRUCTED	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Subbase Outlet Drain	L.F.	418	435	
6" Corrugated Metal Pipe	L.F.	72	72	
8" Corrugated Metal Pipe	L.F.	250	250	
15" Corrugated Metal Culvert Pipe (Paved Invert)	L.F.	159	156	
12" Reinforced Concrete Culvert Pipe	L.F.	211	208	
15" Reinforced Concrete Culvert Pipe	L.F.	793	783	
21" Reinforced Concrete Culvert Pipe	L.F.	251	251	
24" Reinforced Concrete Culvert Pipe	L.F.	330	326	
12" Reinforced Concrete Sewer Pipe	L.F.	16	21	
Manholes	Unit	3	3	
Inlets, Type A	Unit	1	1	
Inlets, Type B (4-6" Heads; 11-10" Heads)	Unit	15	15	
Inlets, Type E	Unit	2	2	
Catch Basins with Trap (3-8" Heads)	Unit	3	3	
Reset Heads	Unit	2	0	
Manholes, Inlets and Catch Basins, Additional Depth	L.F.	14	16	
Rock Excavation, Subsurface Structures	C.Y.	See Total	14	
(Water Supply)				
6" Cast Iron Water Pipe	L.F.	10	5	
Cast Iron Fittings	Ton	0.1	0	
16"x6" Tapping Sleeve & Valve	Unit	2	2	
Relocation of Existing Hydrant	Unit	2	2	
Plugging & Capping	Unit	4	2	
Shutting Off Existing Service at Existing Main	Unit	11	11	

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by P.A. Larsen 1965 Traced by M. Athon Checked by C.W. Koch

℄ 643+30/64' Rt. to ℄ 648+20/125' Rt.
Construct:
- 196 L.F. Subbase Outlet Drain
- 30 L.F. 6" C.M.P.
- 57 L.F. 15" C.M.C.P. (Paved Invert)
- 156 L.F. 12" R.C.C.P. 155 L.F.
- 369 L.F. 15" R.C.C.P. 377 L.F.
- 1 Unit Inlets, Type A
- 8 Units Inlets, Type B

℄ 644+70/225' Lt. to ℄ 647+60/250' Lt.
(Water Supply)
Construct:
- 510 L.F. 6" C.I. Water Pipe
- 0.9 Ton C.I. Fittings (Nominal Amount)
- 2 Units 16"x 6" Tapping Sleeve & Valve
- 2 Units Relocation of Existing Hydrant
- 2 Units Plugging & Capping
- 11 Units Shutting Off Exist. Service at Exist. Main

℄ 645+00/230' Rt. to ℄ 647+80/215' Rt.
(Water Supply)
Construct:
- 0.1 Ton C.I. Fittings
- 0.2 Units Plugging & Capping

℄ 643+30/50' Lt. to ℄ 649+00/155' Lt.
Construct:
- 452 L.F. Subbase Outlet Drain
- 36' L.F. 6" C.M.P.
- 250' L.F. 8" C.M.P.
- 392 L.F. 15" C.M.C.P. (Paved Invert)
- 578.5 L.F. 12" R.C.C.P.
- 492 L.F. 15" R.C.C.P.
- 267 L.F. 21" R.C.C.P.
- 330 L.F. 24" R.C.C.P.
- 2 Units Manholes
- 6 Units Inlets, Type B
- 2 Units Inlets, Type E
- 1 Unit Catch Basins with Trap
- 0.45 L.F. M.H. & Inlets, Additional Depth
- 1/4 C.Y. Rock Ex., Subsurface Structures

LEGEND
- J.B. - Junction Box
- Lt. - Lighting Standard
- J.B.&Lt. - Junc. Box & Light. Std.
- L.C. - Load Center
- A.O.B.E. - As Ordered By Engineer
- J.B. - Junction Box - Bridge or Wall Item
- - Standard Foundation, Traffic Signal Standard
- - Meter Cabinet
- DR. - Drainage Flow

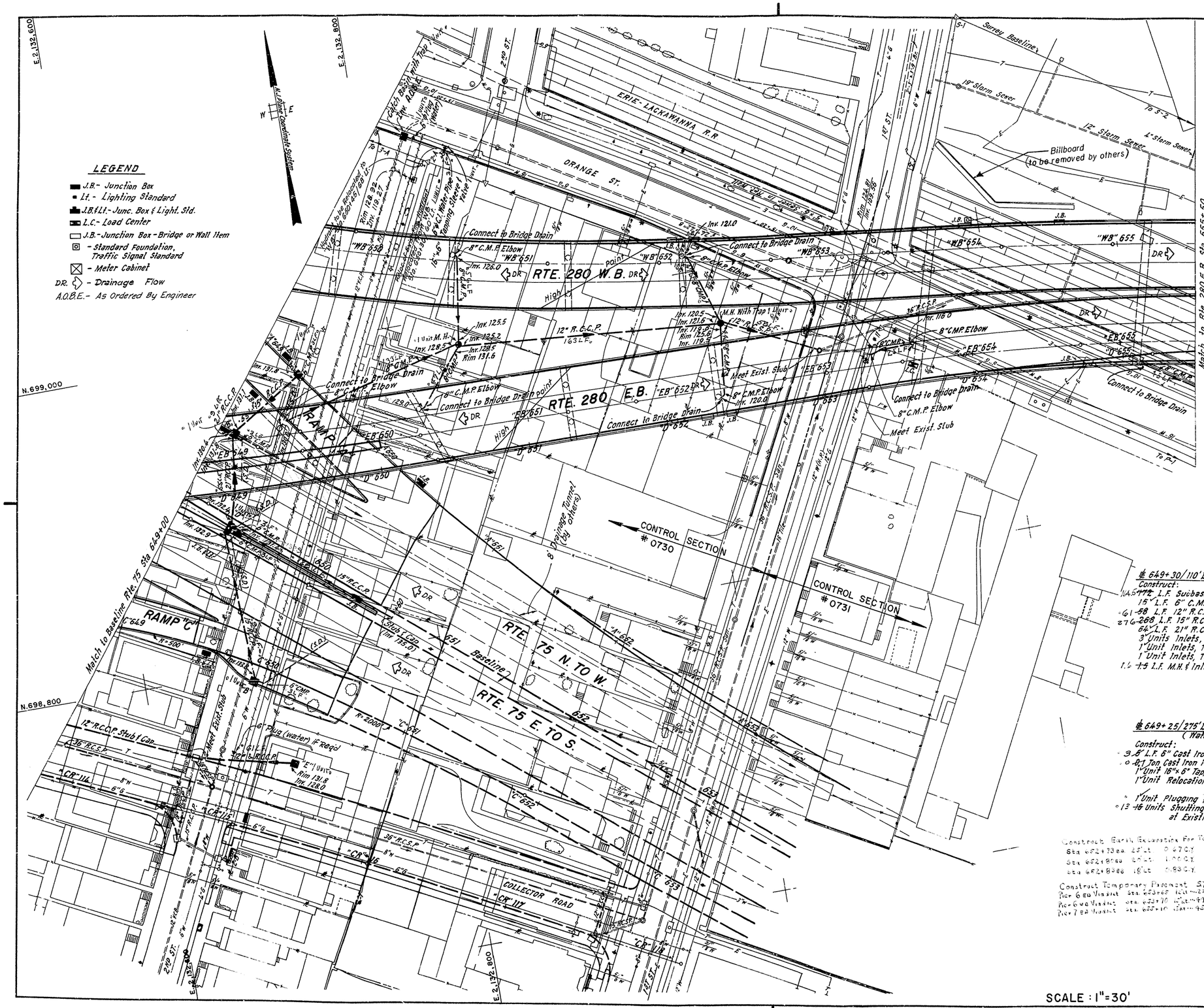
SCALE: 1" = 30'

State Of New Jersey
Department Of Transportation
DRAINAGE & UTILITY RELOCATION PLANS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

18/132

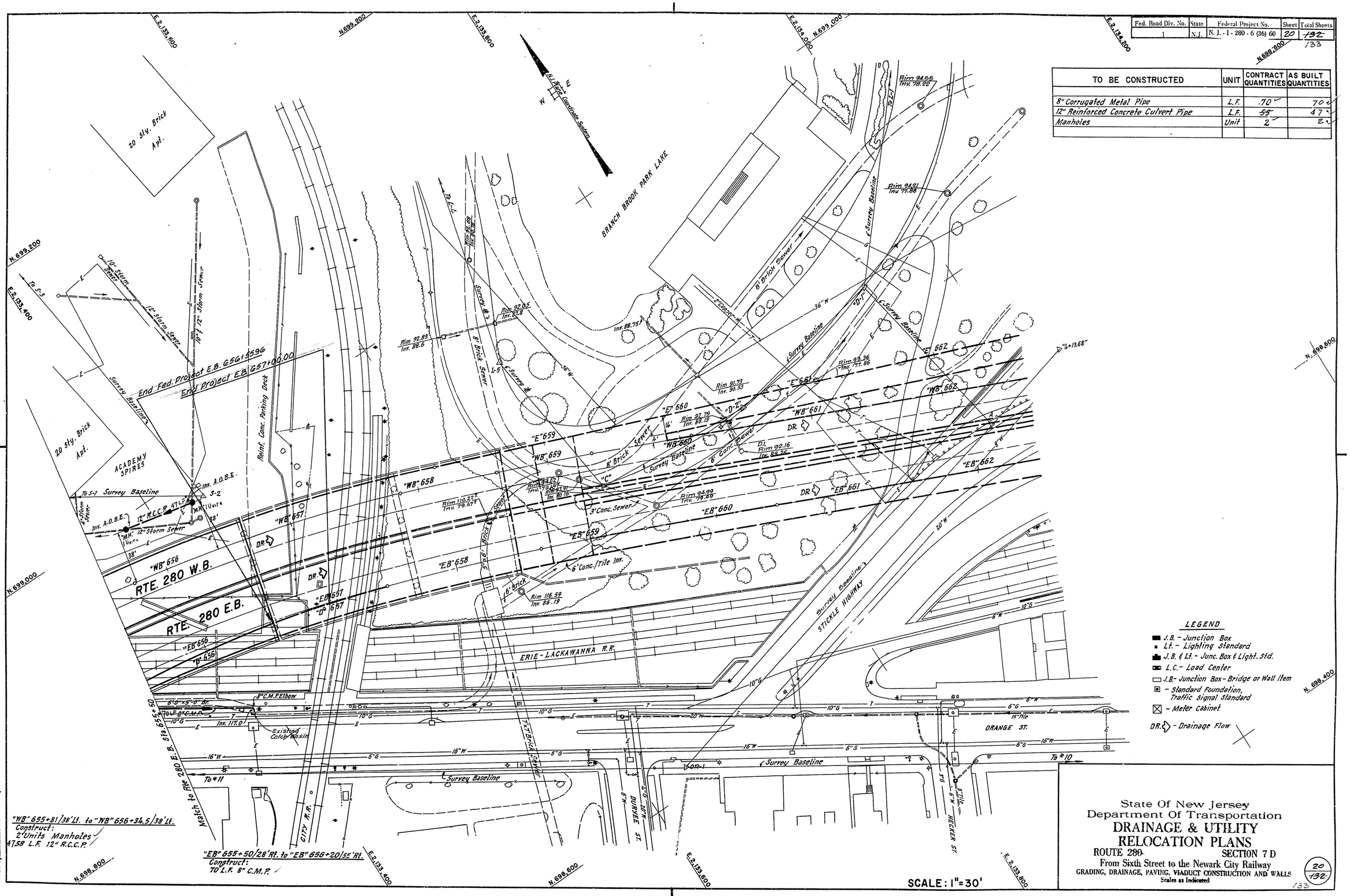
0731 018 133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (36) 60	19	~~132~~ 133


LEGEND
J.B.- Junction Box
Lt. - Lighting Standard
J.B.&Lt.- Junc. Box & Light. Std.
L.C.- Load Center
J.B.- Junction Box - Bridge or Wall Item
- Standard Foundation, Traffic Signal Standard
- Meter Cabinet
DR. - Drainage Flow
A.O.B.E.- As Ordered By Engineer
All Plans Coordinate System
E 2,132,600
E 2,132,800
N.699,000
N.698,800
E 2,132,200
E 2,132,000
RTE. 280 W.B.
RTE. 280 E.B.
RTE. 75 N. TO W.
RTE. 75 E. TO S.
RAMP "C"
RAMP "D"
ERIE-LACKAWANNA R.R.
ORANGE ST.
1st ST.
2nd ST.
CONTROL SECTION #0730
CONTROL SECTION #0731
Survey Baseline
Billboard (to be removed by others)
Match to Rte. 280 E.B. Sta. 655+50
Match to Baseline Rte. 75 Sta 649+00
Connect to Bridge Drain
Meet Exist. Stub
Drainage Tunnel (by others)
COLLECTOR ROAD
Existing Subway Tunnel
Existing Water Pipe
Existing Sewer
Existing Gas Pipe
Existing Telephone Duct
Existing Electric Duct
Existing Conduit
Existing Fiber Optic Cable
Existing Underground Cable
Existing Overhead Wires
Existing Fence
Existing Guide Rail
Existing Concrete Barrier
Existing Curb
Existing Edge of Pavement
Existing Right of Way
Existing Property Line
Existing Building
Existing Retaining Wall
Existing Bridge
Existing Tree
Existing Light Standard
Existing Traffic Signal Standard
Existing Sign
Existing Hydrant
Existing Manhole
Existing Catch Basin
Existing Inlet
Existing Gas Valve
Existing Water Valve
Existing Telephone Manhole
Existing Electric Manhole
Existing Gas Manhole
Existing Utility Pole
Existing Gas Meter
Existing Water Meter
Existing Telephone Pedestal
Existing Electric Pedestal
Existing Gas Pedestal
Existing Water Pedestal
Existing Monument
Existing Mail Box
Existing Parking Meter
Existing Flood Light
Existing Transformer
Existing Air Vent
Existing Fire Alarm Box
Existing Traffic Signal Control Box
Existing Traffic Signal Pedestal
Existing Traffic Signal Mast Arm
Existing Traffic Signal Span Wire
Existing Traffic Signal Pull Box
Existing Traffic Signal Loop
Existing Traffic Signal Conduit
Existing Traffic Signal Cable
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Existing Traffic Signal Interconnect

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N.J. - I - 280 - 6 (36) 60	20	132 133

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
8" Corrugated Metal Pipe	L.F.	70	70
12" Reinforced Concrete Culvert Pipe	L.F.	55	47
Manholes	Unit	2	2



LEGEND

- J.B. - Junction Box
- Lt. - Lighting Standard
- J.B. & Lt. - Junc. Box & Light. Std.
- L.C. - Load Center
- J.B. - Junction Box - Bridge or Wall Item
- ⊡ - Standard Foundation, Traffic Signal Standard
- ⊠ - Meter Cabinet
- DR. ⇨ - Drainage Flow

State Of New Jersey
Department Of Transportation

DRAINAGE & UTILITY RELOCATION PLANS

ROUTE 280 SECTION 7 D

From Sixth Street to the Newark City Railway

GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS

Scales as Indicated

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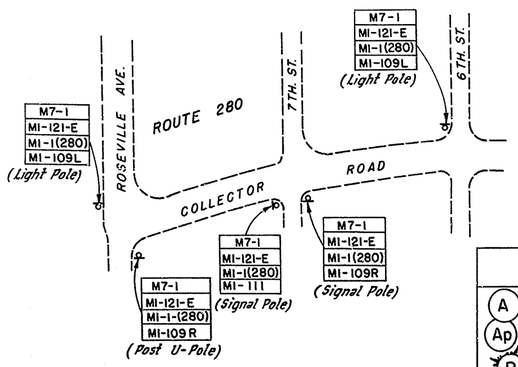
Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by C. Koch Traced by M. Athas Checked by R. Larsen

0731 020 133

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - 1 - 280 - 6 (36) 60	21	132

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TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Sign Size 9"x 21"	Unit	7	7
Sign Size 12"x 18"	Unit	7	7
Sign Size 12"x 36"	Unit	6	6
Sign Size 15"x 21"	Unit	7	7
Sign Size 24"x 24"	Unit	3	3
Sign Size 25"x 30"	Unit	7	7
Sign Size 48"x 48"	Unit	1	1
Sign Size 48"x 60"	Unit	1	1
Sign Type GA	S.F.	128	127.5
Sign Type GO	S.F.	102	102
Delineators Type II	Unit	23	0
Sign Size 60"x 72"	Unit	1	1
Beam Guard Rail	L.F.	114	0



SCHEMATIC PLAN SHOWING SIGNS ALONG COLLECTOR ROAD

			Root	Size Cal.	Size Hgt.	Spacing	Quantity
A	Acer platanoides	Norway Maple	B&B	2-2½"	12-14'		17 / 16
Ap	Acer platanoides Column	Norway Maple Column	B&B	2-2½"	12-14'		12 / 7
P	Pinus nigra	Austrian Pine	B&B		6-8'		43 / 36
Pn	Pinus nigra	Austrian Pine	B&B		4-5'		47 / 36
●	Euonymus alatus	Winged Euonymus	B&B		2-3'		124 / 122
F.s.	Forsythia intermedia Showy	Showy Border Forsythia	B.R.		18-24"	5'	910
PARTHENOCISSUS TRICUSPIDATA		Japanese Creeper					45

DELINEATOR SYMBOLS

• TYPE II

LEGEND

- Bridge Approach Transition Slab, 13½" Avg. th.
- Bridge Approach Slab, 18" th.
- DR. ⇨ Surface Drainage Flow

SCALE : 1" = 30'

For Pavement Elevations Rte. 280 E.B. over Rte. 75 See Following Sheet.

State Of New Jersey
Department Of Transportation

GRADING, SIGNING & LANDSCAPING PLANS

ROUTE 280 SECTION 7 D

From Sixth Street to the Newark City Railway

GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS

Scales as Indicated

21 / 132

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Made by C. Nash Traced by M. Ahern Checked by A. Larsen

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Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - 1 - 280 - 6 (36) 60	22	132
				133

AUXILIARY PLAN DETAILS

Pavement Elevations for Rte. 280 E.B. over Rte. 75

See Preceding Sheet

See Upper Center of this Sheet

		Root	Size Cal.	Size Hgt.	Spacing	Quantity
A — *Acer platanoides*	*Norway Maple*	B&B	2-2½"	12-14'		11 12
Ap — *Acer platanoides Column*	*Norway Maple Column*	B&B	2-2½"	12-14'		3
P — *Pinus nigra*	*Austrian Pine*	B&B		6-8'		12 13
Pn — *Pinus nigra*	*Austrian Pine*	B&B		4-5'		10
● — *Euonymus alatus*	*Winged Euonymus*	B&B		2-3'		34 24
Fs. — *Forsythia intermedia Showy*	*Showy border Forsythia*	B.R.		18-24"	5'	—

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Sign Type GO	*S.F.*	*105*	*105*

LEGEND

DR. ⇨ Drainage Flow

SCALE : 1"=30'

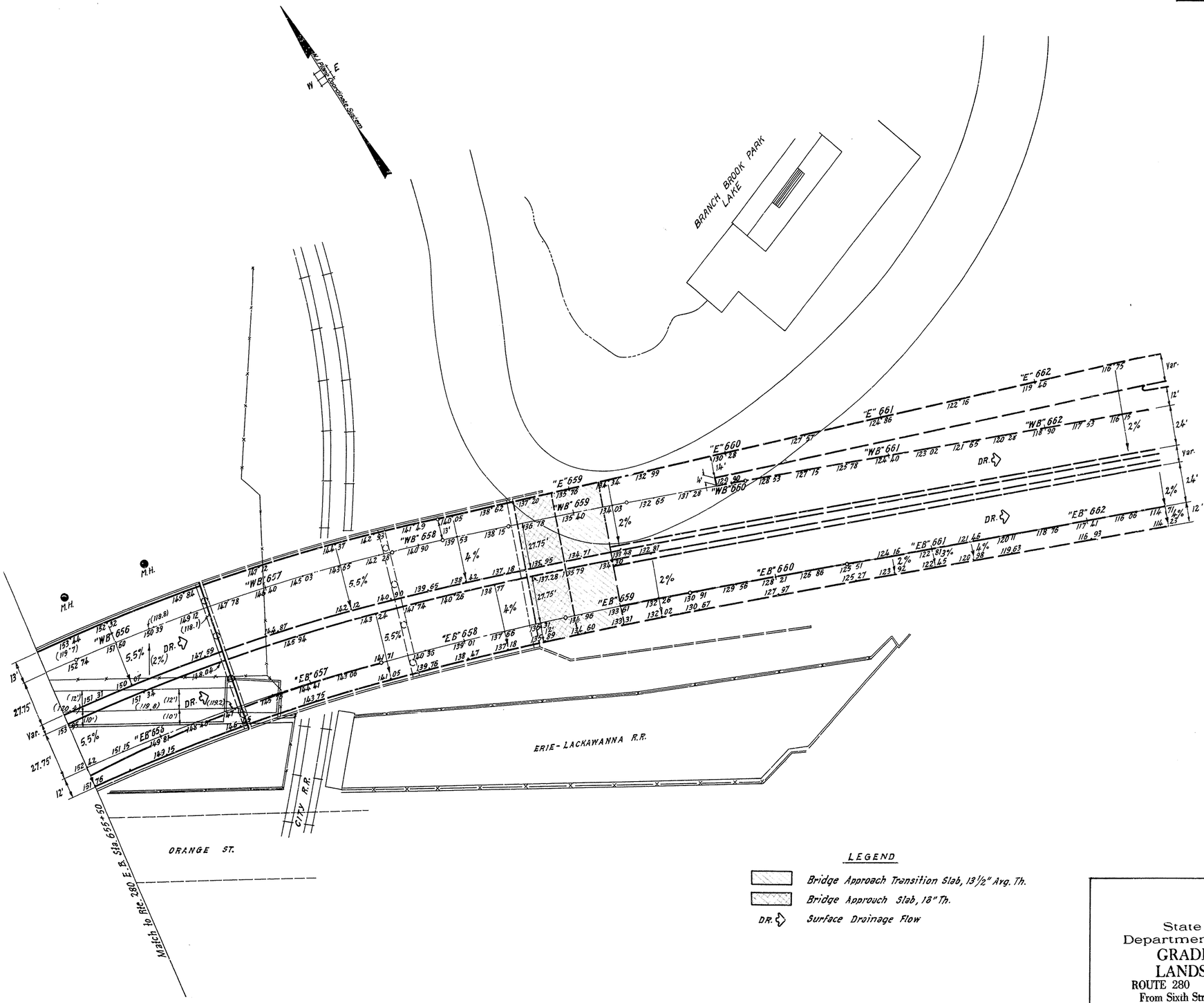
State Of New Jersey
Department Of Transportation
GRADING, SIGNING & LANDSCAPING PLANS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

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Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - 1 - 280 - 6 (36) 60	23	132

133



LEGEND

- Bridge Approach Transition Slab, 13½" Avg. Th.
- Bridge Approach Slab, 18" Th.
- DR. Surface Drainage Flow

SCALE : 1" = 30'

State Of New Jersey
Department Of Transportation
GRADING, SIGNING & LANDSCAPING PLANS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

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Prepared by Parsons, Brinckerhoff, Quade & Douglas
Made by C. Koch Traced by M. Athan Checked by A. Larsen

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FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1		N. J.		24	132

/133

BEGIN PROJECT
BASELINE ROUTE 280
E.B STA. 640+19.00

(EXIST) ORANGE STREET

TELEPHONE MANHOLE

15TH ST.

47TH ST.

TSA C1 — 5FT FND & TYPE "T" STANDARD — 2½"C.-10/C #12TW

TSA 15TA-2

TSA 15TA-1 — 2½"C-10#12TW — SEE ENLARGED VIEW BELOW

TSA 15TA-3 — 2½"C-10#12TW

TYPE "T" STANDARD

2½"C-10#12TW

5FT FND

LOAD CENTER "L" METER CABINET TYPE "T"

3"C EMPTY

CONDUIT

BG643+10

BG643

L-8 215

2½"C STUB OUT FOR INCOMING SERVICE (SEE NOTE 4, DWG E2)

MCF

EMPTY 2½"C-THREAD & CAP (FOR FUTURE TRAFFIC DETECTOR ON RAMP B1)

1½"C-2#6 (CKT. 6H)

3"C-2#4 (CKT. 6H)

6TH STREET

PICK UP EXIST. CKT. 6H WIRES (3#4) & (CKT. 11H WIRES (3#4) IN THIS EXIST. JUNCTION BOX (FROM SEC. GK-7C)

BG42

BG41

BG40+98 — L-8 348 — GH-ΦAB

RAMP "B"

1.26T — 1.73T MA — 1.14R

BG42+38 — L-8 349 — GH-ΦBC

BG43

BG43+78 — L-8 216 — GH-ΦAC

SPLICE NEW WIRES TO EXISTING WIRES IN THIS J.B.

3"C.-3#4 (CKT. 6H) 3#4 (CKT. 11H)

PICK UP EXIST. 3"C.

INSTALL 3#4 (CKT. 6H) & 3#4 (CKT. 11H) IN EXIST. 3"C.

3"C.-3#4 (CKT. 6H) 3#4 (CKT. 11H)

B644

B644

3"C.-2#4 (CKT. 11H)

BG45 — L-8 218 — 11H-ΦAC

BG45+15 — 11H-ΦAB

BG46 — BG45+92 — L-8 220

CONNECT #8 GROUND WIRE TO GROUND ROD IN THIS JUNCTION BOX

3"C.-EMPTY

BG47 — BG47+52 — L-8 222 — 5K-ΦAB

INSTALL PHOTOCELL ON THIS LUMINAIRE

3"C.-2#4 (CKT. 5K) 3#10 (PHOTOCELL)

1#8 GND

BG47+03

RAMP "A"

8K

AG47

2½"C "CUR" R.M.C. FOR FUTURE L-8

3"C BRIDGE ITEM 3#4, (CKT 5K) 1#8 GND

EMPTY 3"C.

(SEE NOTE 6)

CKT. 5K-3#4, 1#8 GND & 3#10 PHOTOCELL IN 3"C

WING WALL

BG48

10"x36" J. BOX FOR SIGN 6051 BRIDGE ITEM

GO 51 BG48+50

WBG49

℄ PIER 1

FOR UNDERDECK LIGHTING SEE DWG E5

AG48

℄ W. ABUT.

WBG48

WBG48+30

1.61T — 1.25MA — 5.31R — L-8 223 — 11H-ΦAC

A648+66 360

8K

EMPTY 3"C.

WBG44

WBG44+25

6H-ΦBC — L-8 217

WBG45

WBG46

WBG47

WBG45+10 — L-8 219 — 11H-ΦAB

RTE 280 W.B.

WBG46+70 — L-8 221 — 11H-ΦBC

3"C.-3#4 (CKT. 11H)

3"C.-2#4 (CKT. 11H)

END OF WALL "V"

EXIST. EMPTY 3"C.

EXIST. FOUNDATION

EXIST. RETAINING WALL "V"

PICK UP EXIST. 3"C

EMPTY 3"C. (BRIDGE ITEM)

FOR FUTURE L-15SB

NEW RETAINING WALL "AV"

G44+71.5 — 380 — C.I. JUNCTION BOX-24"X12"X10" (BRIDGE ITEM)

G46+31.5 — 357

FOR FUTURE L-15

G47+31.5 — 355

9H

WING WALL

FOR FUTURE L-8

END OF WALL "U"

BASELINE

G43

G45

G46

G47

RTE 75 N. To W.

NEW RETAINING WALL "BU"

FOR FUTURE L-15SB

G44 — 18"x36" JUNCTION BOX

EMPTY 3"C.

FOR FUTURE L-15TW

FOR FUTURE L-15T

EXIST. RETAINING WALL "U"

9H — G643+91.5 — 352 — PICK UP EXIST. 5"C.

PICK UP EXISTING 5" CONDUIT STUBOUTS AND CONNECT TOGETHER

END OF WALL "BU"

EMPTY 3"C

9H — G645+51.5 — 353

9H — G647+11.5 — 354

PIER 1

RTE 75 E. To S.

EXISTING LAMPPOST #346 — G643+11

G644+70 — 355 — 9H

FOR FUTURE L-15SB

PICK UP 1½"C.

PICK UP 3"C

NEW RETAINING WALL "C"

G646+31.5 — 356 — 9H

PICK UP 1½"C

PICK UP 3" EMPTY CONDUIT FROM VIADUCT

2#6 (CKT 8H) & 1#8 GND

INSTALL 3-30A FUSED CONNECTORS FOR UNDERDECK LIGHTING ON ABUTMENT FOR UNDERDECK LTG SEE DWG E5

EBG48

SIDEWALK 10"x36" JUNCTION BOX BRIDGE ITEM

3#6 CKT 12K & 1#8 GND

3"C-3#6 (CKT. 8H)

JUNCTION BOX TO CLEAR CONCRETE GUTTER

EMPTY 3"C

CONNECT #8 GROUND WIRE TO THE GROUND ROD IN THIS JUNC. BOX

8H-ΦBC

8H-ΦAB — L-8 224 — EBG643+35

1.85I — 1.08MA — 1.22R — L-8 225 — EBG644+35

EBG644

EBG645

EBG646

EBG647

L-8 226 — EBG645+35

L-8 230 — DG647+10

5H-ΦAB

1.00I — .589MA — 1.36R — L-8 229 — DG645+85 — DG646

3"C.-2#6 (CKT. 5H)

CONNECT #8 GROUND WIRE TO GROUND ROD IN THIS JUNC. BOX

3"C.

FOR FUTURE L-15

PICK UP 3"C.

WING WALL

(SEE NOTE 6)

8K

EMPTY 3"C

EBG643

EXISTING RETAINING WALL "S"

END OF WALL "S"

DG643

L-8 227 — DG643+35 — 5H-ΦBC

DG644

RAMP "D"

DG644+50 — L-8 228 — 5H-ΦAB — DG645

3"C.-3#6 (CKT. 5H)

PICK UP EXIST. CKT. 6H WIRES (3#6) IN THIS EXIST. JUNCTION BOX (FROM SEC. GK-7C)

PICK UP EXIST 3"C 3#6 (CKT. 5H) IN EXIST. 3"C (FROM SEC. GK-7C)

PICK UP EXIST. CONDUIT

C646+60 — 4H-ΦAB

NEW RETAINING WALL "C"

"C"647

C647+60 — 357

C648+60 — 358

FOR FUTURE L-8

EMPTY 3"C FOR FUTURE L-8

RAMP "C"

"C"645

"C"646

L-8B8 209

EXISTING EMPTY 1½"C UNDER ROADWAY

COLLECTOR ROAD

CR109

CR110

CR111

CR112

INSTALL 2#6 (CKT 4H) IN EXISTING CONDUIT

CONNECT 2#6 THRU 2 FUSED CONNECTORS TO EXISTING #2 WIRES (CKT. 4H-ΦAB) IN THIS JBF.

REGIN. FED. PROJ. NO. NJ-1-280
BASELINE ROUTE 280 EB STA
643+16.00

5TH STREET

4TH STREET

MATCH LINE TO SHEET E2 - BASELINE STA. 643+00

WEST OF 1ST ST. 073056I (CONST. ELECT.)

ENLARGED VIEW TRAFFIC CONTROL

LOAD CENTER- "L"

15'-0"± — ORANGE ST. — EDGE OF CURB

2½"C 10#12TW TO JUNC. BOXES

18"x36" JUNC. BOX

2½"C EMPTY. THE UTILITY CO. WILL EXTEND COND. TO THEIR MANHOLE (SEE NOTE 4, DWG E2)

2½"C EMPTY

2½"C-2#12TW

RAMP "B"

METER CABINET FOUNDATION (MCF)

METER CABINET - TYPE "T".

TRAFFIC SIGNAL CONTROLLER

2½" C. EMPTY

EMPTY 3"C TO TEL. MANHOLE FOR FUTURE TRAFFIC SIGNAL INTER-CONNECTION.

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Lighting Standard Assembly Type L-8	Unit	19	17
Junction Box Foundation, Class JBF	Unit	25	23
18"x36" Junction Box	Unit	13	12
3" Rigid Metallic Conduit - Type CUG	Lin.Ft.	3800	2762.5
1½" Rigid Metallic Conduit - Type CUG	Lin.Ft.	110	99
Multiple Lighting Wire, #10 AWG	Lin.Ft.	0	793
Multiple Lighting Wire, #4 AWG.	Lin.Ft.	5210	4,420
Multiple Lighting Wire, #6 AWG.	Lin.Ft.	3850	2508
Groundwire - #8AWG, TW	Lin Ft.	560	632
Meter Cabinet, Type T	Unit	1	1
METER CABINET FOUNDATION, TYPE MCF	UNIT	1	1
Traffic Signal Controller	Unit	1	1
Traffic Signal Assembly, Type-15TA-1	Unit	2	2
Traffic Signal Assembly, Type-15TA-2	Unit	2	2
Traffic Signal Assembly. Type-C1	Unit	2	2
Traffic Signal Standard, Type "T"	Unit	2	2
Standard Foundation. Class-"SFT"	Unit	2	2
2½" Rigid Metallic Conduit - Type CUG	Lin.Ft	240	294
Signal Wire #12 AWG, TW	Lin.Ft	1380	1,892
2½" Rigid Metallic Conduit - Type CUR	Lin.Ft	140	0
STRUCTURE GO-51, ELECTRICAL WORK	L.S.	L.S.	100%

NOTES:

1.- FOR SYMBOL LIST SEE DWG. E6

2.- CONDUITS AND SIDEWALK JUNCTION BOXES IN VIADUCT SAFETY WALKS ARE INCLUDED IN BRIDGE ITEMS

3. FOR ELECTRICAL WORK IN VIADUCTS SEE DWGS E4 & B29

4. FOR ANCHORAGES IN WALLS SEE DWGS B-32, B-33 & B-34

5 THE #10 WIRING FOR THE PHOTOCELL SHALL BE INCLUDED IN THE COST OF LOAD CENTER "11"

6. EMPTY 1½"C-UP FOR FUTURE RAIL LIGHTING

E1 / 15

PLAN SCALE: 1" = 30'

REVISION	BY	CHK.	DATE

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

24 / 132

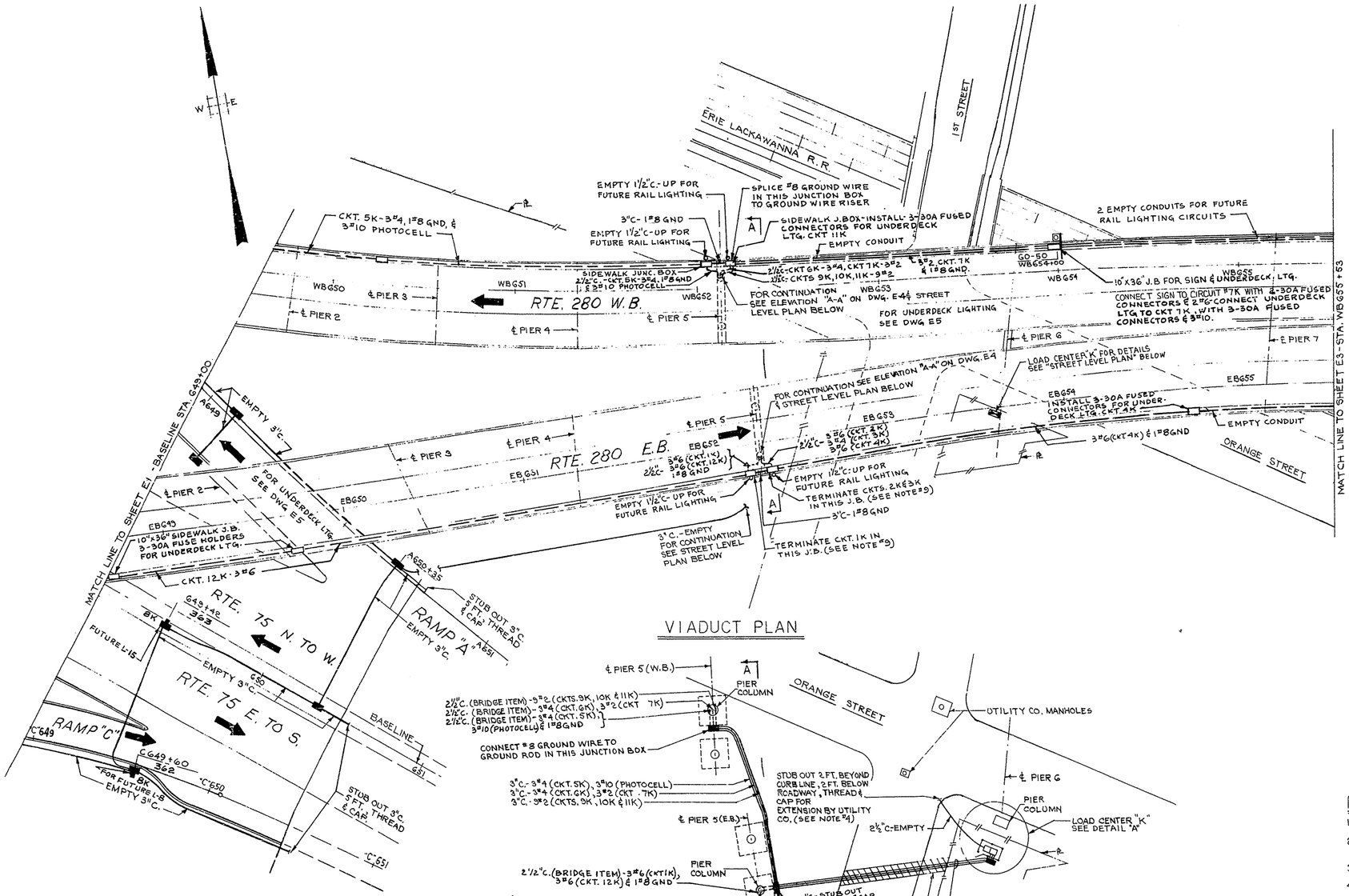
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ROUTE 280 SECTION 7D

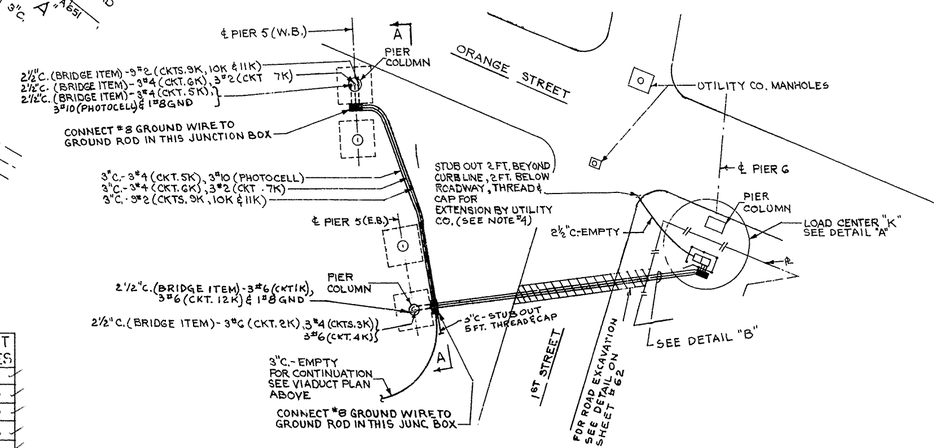
073I 024 133

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1		N. J.		25	132

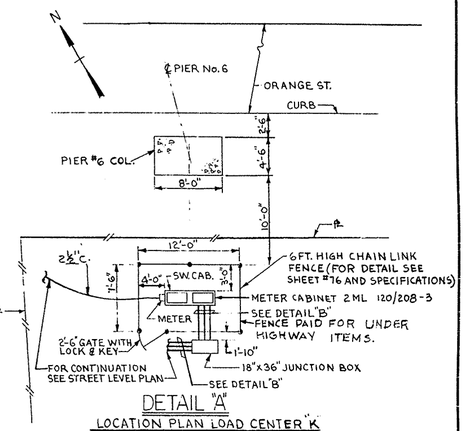
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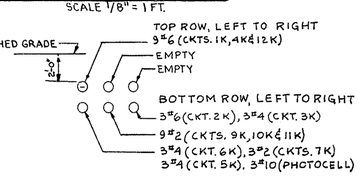
VIADUCT PLAN



STREET LEVEL PLAN



DETAIL "A"
LOCATION PLAN LOAD CENTER "K"
SCALE 1/8" = 1 FT.



DETAIL "B"
CONDUIT BANK

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Junction Box Foundation, Class. JBF	Unit	2	2
18"x 36" Junction Box	Unit	7	6
24"x 16"x 8" C.I. Junction Box	Unit	2	2
Meter Cabinet - 2ML - 120/208-3	Unit	1	1
Meter Cabinet Foundation Type 2M	Unit	1	1
3" Rigid Metallic Conduit type CUG	Lin.Ft	2130	2064.5
2½" Rigid Metallic Conduit type CUG	Lin.Ft	50	35
Multiple Lighting Wire - #2 AWG.	Lin.Ft	4150	7874
Multiple Lighting Wire - #4 AWG.	Lin.Ft	2700	3583
Multiple Lighting Wire - #6 A.WG.	Lin.Ft	2400	2917
STRUCTURE GO-50, ELECTRICAL WORK	L.S.	L.S.	100%
Multiple Lighting Wire, #10 AWG	Lin.Ft.	0	1,959
Ground Wire 1/C #8 AWG, TW	Lin.Ft.	1190	953
2½" Flexible Conduit	Lin.Ft.	50	28

NOTES:

1.- FOR SYMBOL LIST SEE DWG. E6

2.- CONDUITS AND SIDEWALK JUNCTION BOXES IN VIADUCT SAFETY WALKS ARE INCLUDED IN BRIDGE ITEMS.

3.- FOR ELECTRICAL WORK IN VIADUCTS SEE DWGS E4 & B29

4.- CONTRACTOR SHALL COORDINATE HIS WORK WITH THE UTILITY CO. IN REFERENCE TO EXACT LOCATION OF THIS INCOMING SERVICE CONDUIT.

5.- FOR ELEVATION "A-A" SEE DWG. E4

6.- THE CONTRACT QUANTITIES SHOWN ON THIS SHEET INCLUDE ITEMS FROM DWG E4

7.- SEE DWG. B-29 FOR SIGN CONNECTIONS

8.- SEE DWG. E5 FOR UNDERDECK LIGHTING.

9.- LEAVE 5 FT. OF SLACK CABLE IN J.B. AND TAPE ENDS OF CONDUCTORS.

10. THE #10 WIRING FOR PHOTOCELL SHALL BE INCLUDED IN THE COST OF LOAD CENTER "H"

E2 / 15

WEST OF 1ST ST. - 0730361 (CONST. ELEC.)
EAST OF 1ST ST. - 0731365 (CONST. ELEC.)

PLAN SCALE: 1" = 30'

REVISION	BY	CHK.	DATE

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

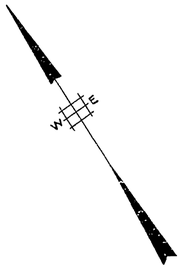
25 / 132 / 133

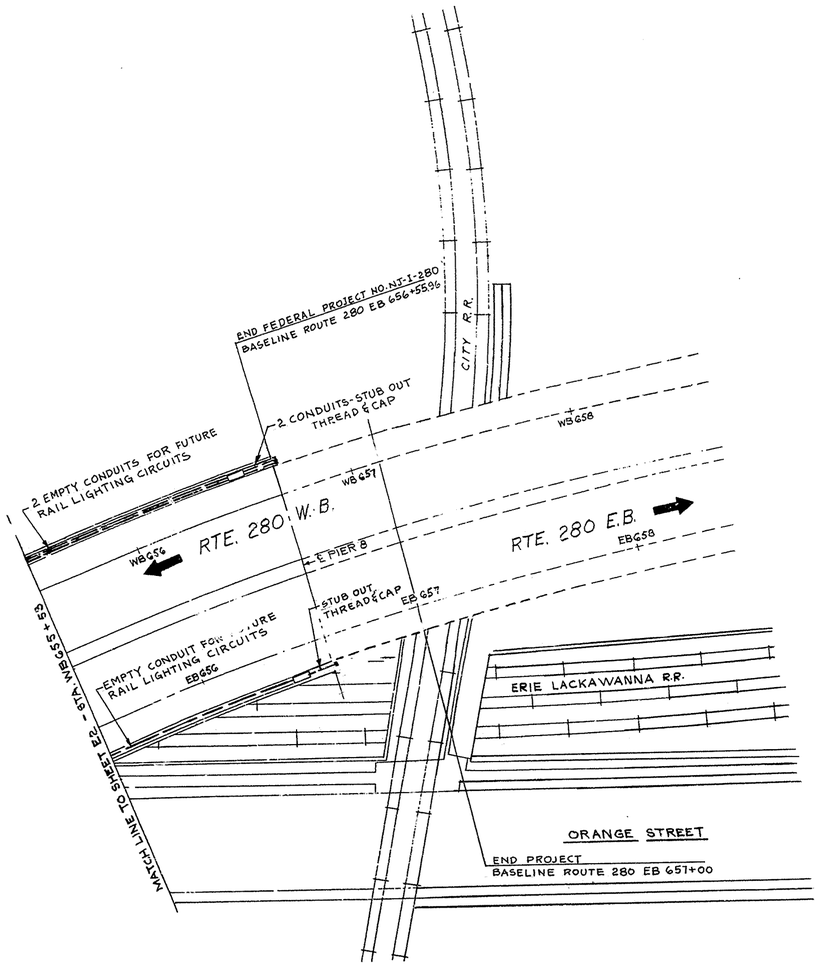
ROUTE 280 SECTION 7D

07310251133

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1		N. J.		26	132

133





NOTES:

1.- FOR SYMBOL LIST SEE DWG. E-6.

2.- CONDUITS AND SIDEWALK JUNCTION BOXES IN VIADUCT SAFETY WALKS ARE INCLUDED IN BRIDGE ITEMS.

3.- FOR ELECTRICAL WORK IN VIADUCT SEE DWGS. E-4 & B 29

E3
15

PLAN SCALE: 1" = 30'

REVISION	BY	CHK.	DATE

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTION 7 D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

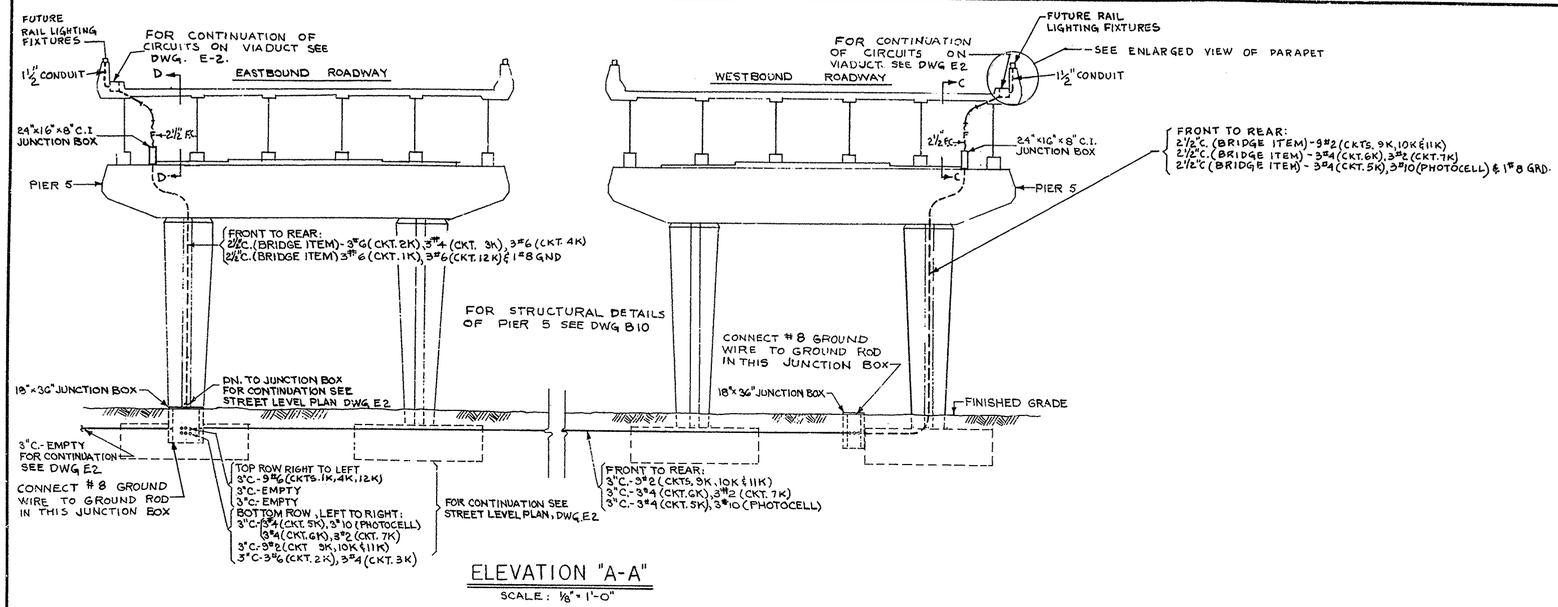
26
132
133

EAST OF 1ST ST. - 0731365 (CONST. ELEC.)

ROUTE 280 SECTION 7D

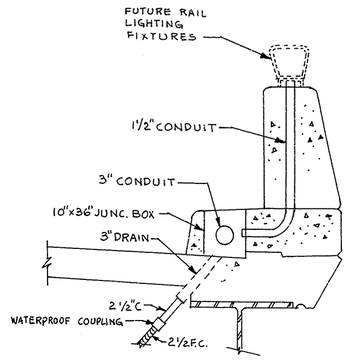
0731 026 133

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1		N. J.		27	132-133



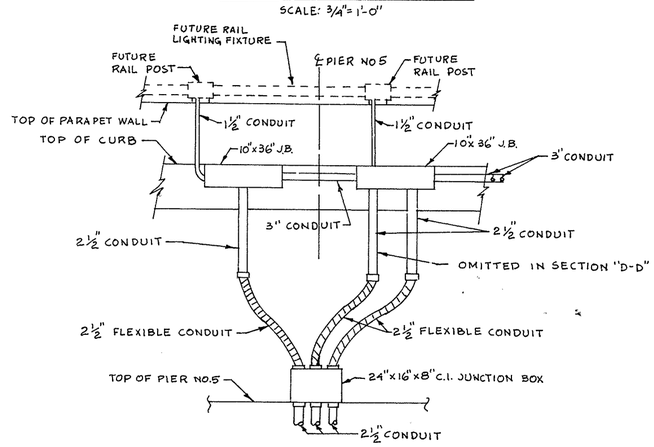
ELEVATION "A-A"

SCALE: 1/8" = 1'-0"



ENLARGED VIEW OF PARAPET

SCALE: 3/4" = 1'-0"



SECTION "C-C"
SECTION "D-D" SIMILAR EXCEPT AS NOTED ABOVE
SCALE: 3/8" = 1'-0"

NOTES:

1. FOR SYMBOL LIST, SEE DWG E6

E4
15

WEST OF 1ST ST. - 0730361 (CONST. ELEC.)
EAST OF 1ST ST. - 0731365 (CONST. ELEC.)

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTION 7D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

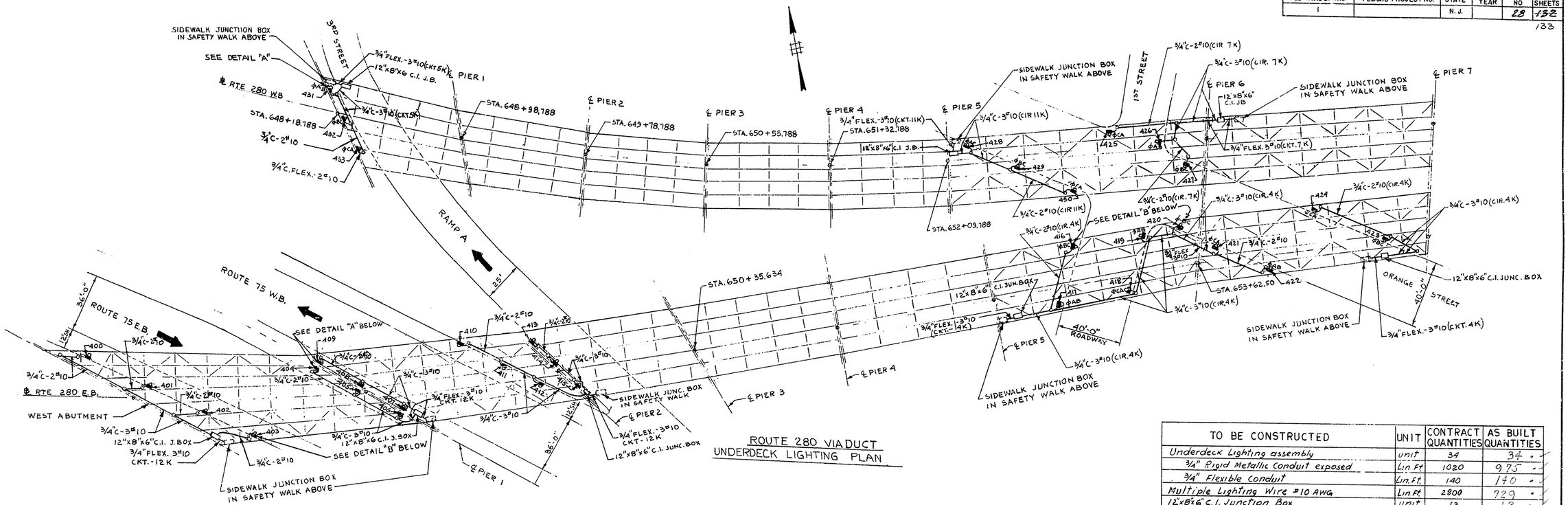
27
132-133

ROUTE 280 SECTION 7D

0731027 133

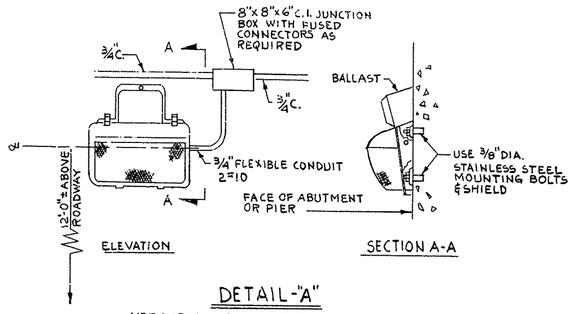
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1		N. J.		28	132

133

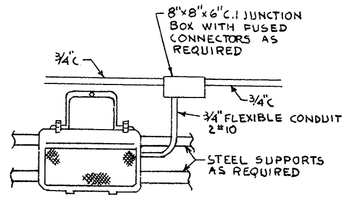


ROUTE 280 VIADUCT
UNDERDECK LIGHTING PLAN

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Underdeck Lighting assembly	unit	34	34 "
3/4" Rigid Metallic Conduit exposed	Lin. Ft.	1020	975 "
3/4" Flexible Conduit	Lin. Ft.	140	170 "
Multiple Lighting Wire #10 AWG	Lin. Ft.	2800	729 "
12"x8"x6" C.I. Junction Box	unit	13	13 "



DETAIL-"A"
MERCURY VAPOR UNDERDECK LUMINAIRE AND METHOD OF MOUNTING ON PIERS OR ABUTMENT
N.T.S.



DETAIL-"B"
MERCURY VAPOR UNDERDECK LUMINAIRE AND METHOD OF MOUNTING BETWEEN STEEL STRINGERS
N.T.S.

NOTE:
1. FOR SYMBOL LIST SEE DWG. E6.

WEST OF 1ST ST. - 0730961 (CONST. ELEC.)
EAST OF 1ST ST. - 0731365 (CONST. ELEC.)

PLAN SCALE: 1" = 30'

REVISION	BY	CHK.	DATE

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTION 7D
From Sixth Street to the Newark City Railway
GRADING, DRAINAGE, PAVING, VIADUCT CONSTRUCTION AND WALLS
Scales as Indicated

E5 / 15

28 / 132 / 133

ROUTE 280, SECTION 7D

0731 028 133

FED. ROAD DIV NO	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	N.J.-I-280-6(40)60	1	122

UTILITY COMPANIES	
PUBLIC SERVICE ELECTRIC & GAS COMPANY	GAS & ELECTRIC & PROPOSED PARK LIGHTING SYSTEM
NEW JERSEY BELL TELEPHONE COMPANY	TELEPHONE
CITY OF NEWARK DIRECTOR OF PUBLIC WORKS	CITY RAILWAY & SEWERS
ERIE-LACKAWANNA R.R. CO.	RAILROAD
PUBLIC SERVICE COORDINATED TRANSPORT OF NEW JERSEY (OPERATOR)	CITY RAILWAY
NEWARK MUNICIPAL UTILITIES AUTHORITY	WATER
ESSEX COUNTY PARK COMMISSION	EXISTING PARK LIGHTING

State of New Jersey
Department of Transportation

PLANS OF

ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue

GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS

City of Newark — Essex County

Scales as Indicated — July 1970

As-Built

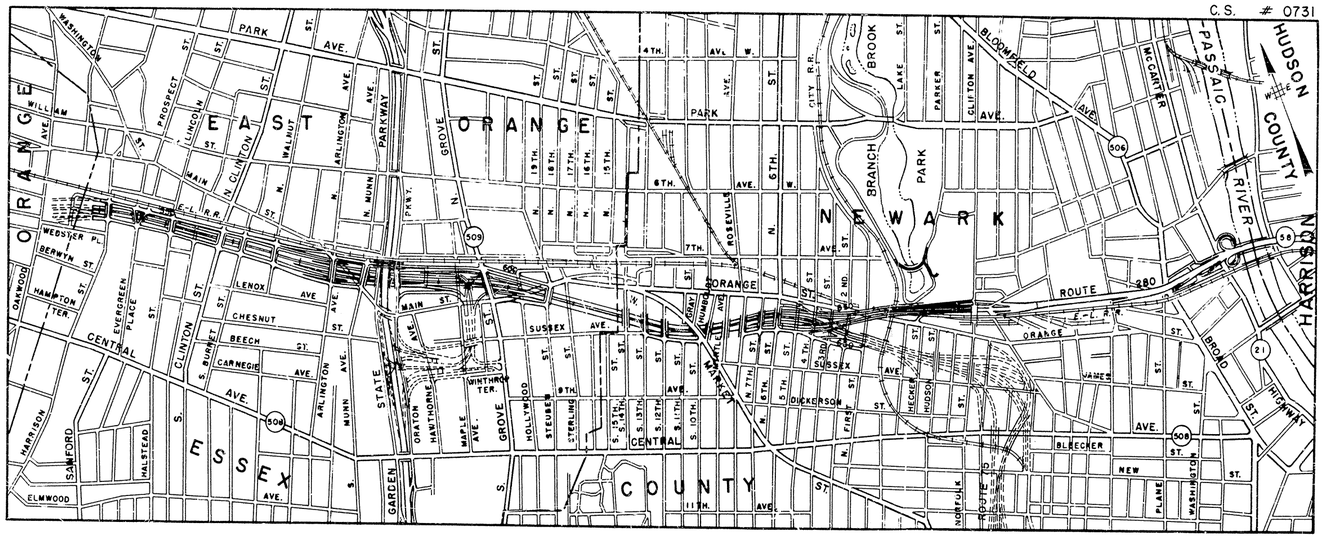
C.S. # 0731

SHEET NO.	INDEX OF SHEETS
1	KEY SHEET
2-3	ESTIMATE OF QUANTITIES
4-5	DISTRIBUTION OF QUANTITIES
6-8	TYPICAL SECTIONS
9	ALIGNMENT
10-12	STAGE CONSTRUCTION PLANS
13	DETOUR PLAN
14-21	PLAN SHEETS
17,18,22-24	DRAINAGE AND UTILITY RELOCATION PLANS
25-27	GRADING, SIGNING AND LANDSCAPING PLANS
28-30	ELECTRICAL PLANS
31-33	PROFILES
34	EARTHWORK SUMMARY
35-46	CROSS SECTIONS
47-80	CONSTRUCTION DETAILS
81-122	BRIDGE AND WALL FOUNDATION PLANS
124-127	MARK CANDELARE C.D.F. NEW JERSEY

BEGIN PROJECT
BASELINE ROUTE 280 E.B. STA. 647+40

END FEDERAL PROJECT NO. N.J.-I-280-6(40) 60
BASELINE ROUTE 280 E.B. STA. 668+74.00

C.S. # 0731



END PROJECT
BASELINE ROUTE 280 E.B. STA. 677+28.00

Resident Engineer: Michael A. Carolan
Contractor: Schiavone Construction Co., Inc.
Construction Started: March 29, 1971
Construction Completed: July 19, 1973
As-Built Plans Prepared by Newark Surface Design Inc.: July 3, 1975
Refer: Field Book: 1757, 1760, 1943, 1961, 1971, & 2138

KEY MAP

SCALE: 1" = 1,000'

BEGIN FEDERAL PROJECT NO. N.J.-I-280-6(40) 60
BASELINE ROUTE 280 E.B. STA. 656+55.96

DESIGN DATA

ADT 1965	=	22,800
ADT 1975	=	56,000
DHV 1975	=	5,770
D	=	55%
T	=	4%
V	=	50M.P.H.

STANDARD HIGHWAY SPECIFICATIONS OF 1961 TO GOVERN

LENGTH OF PROJECT = 2,988.00 LIN. FT. = 0.566 MILE

LENGTH OF FEDERAL PROJECT NO. N.J.-I-280-6(40) 60 = 1218.04 LIN. FT. = 0.231 MILE

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS

APPROVED [redacted]
Division Engineer — Date

Submitted by [signature] 7/21/70
Date
Approved by Joseph F. Cunningham 7/22/70
Date
Approved by [signature] 7/22/70
Date

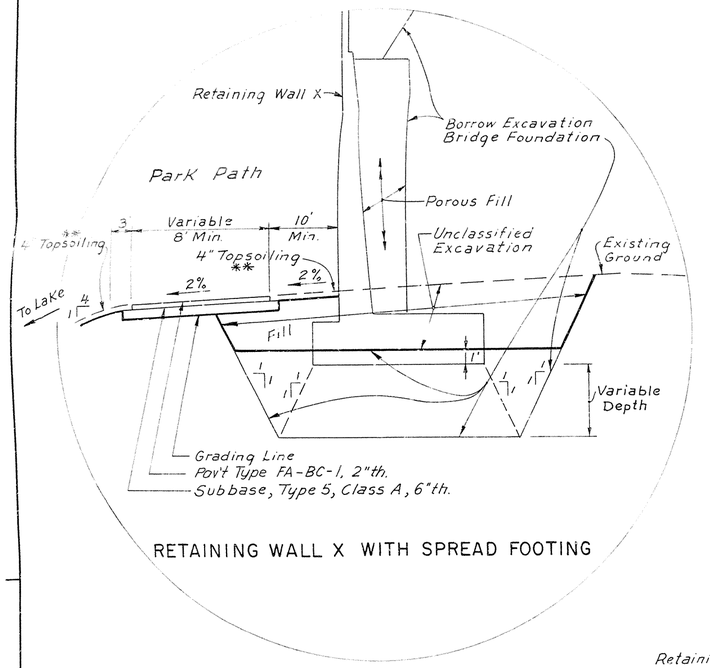
(1/122)

42-15

0731 001 127

FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	N.J.-I-280-6(40)GO	6	122

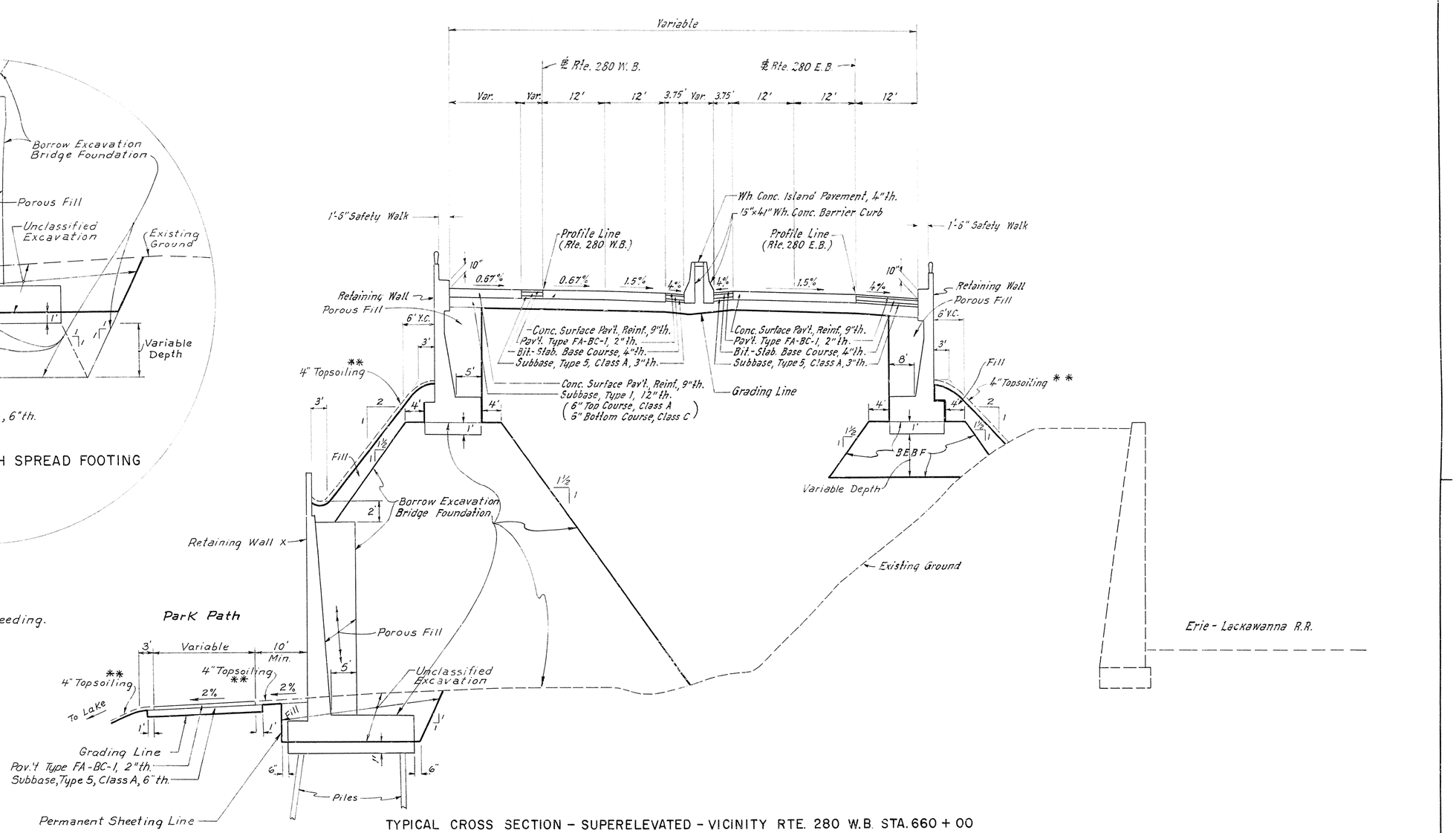
SCALE: HOR. 1" = 10'
VERT. 1" = 5'



RETAINING WALL X WITH SPREAD FOOTING

Note:
** - 4" Topsoiling, Fertilizing & Seeding. Type A, & Hay Mulching

Ramp "E" Rte. 280 W.B. Roadway Rte. 280 E.B. Roadway



TYPICAL CROSS SECTION - SUPERELEVATED - VICINITY RTE. 280 W.B. STA. 660 + 00

R.J. Larsen
M. Bannwarth
R.J. Larsen

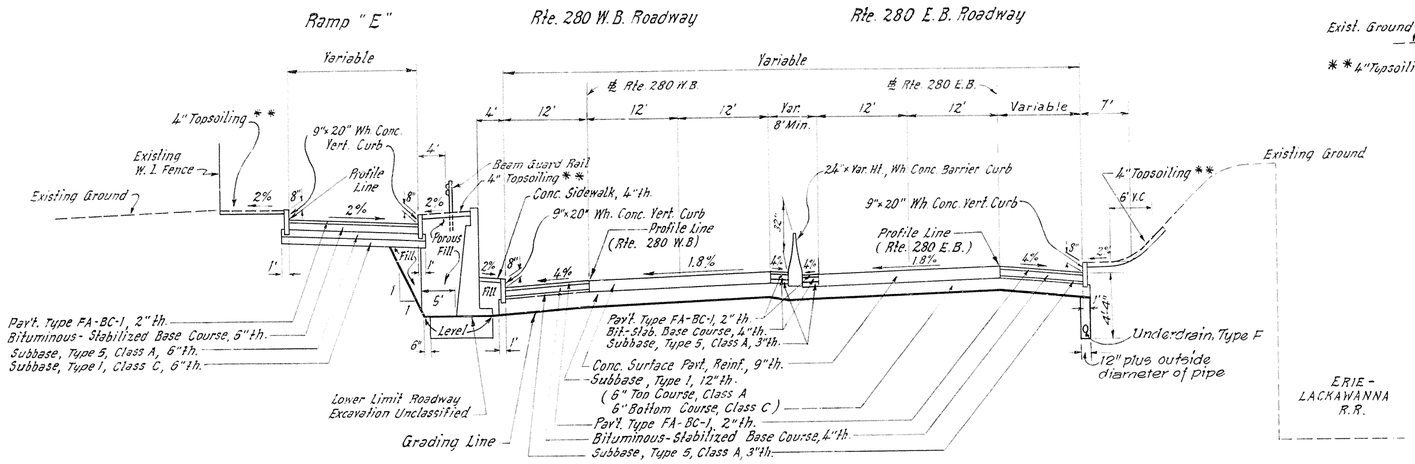
State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

6/122

0731 006 127

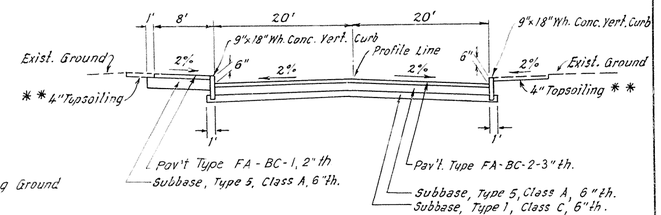
SCALE : HOR. 1"= 10'
VERT. 1"= 5'

FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	N.J.-I-280-6(40)60	7	122

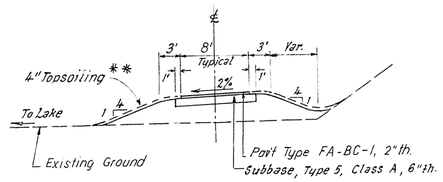


TYPICAL CROSS SECTION - SUPERELEVATED - VICINITY RTE. 280 W.B. STA. 665 + 50

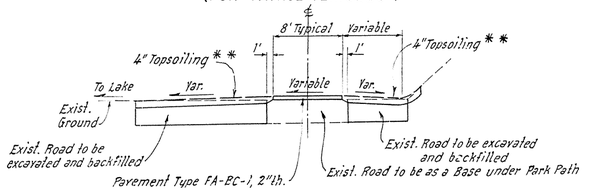
Height of Fill	Side Slope	V.C.	Dist. to P.V.I.
0'-5'	6:1	4'	2'
5'-9'	4:1	6'	3'
9' and above	2:1	6'	7'
Cut	2:1	6'	7'



TYPICAL CROSS SECTION
PARK ROAD

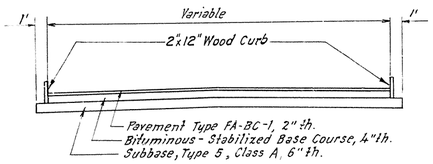


TYPICAL CROSS SECTION
PARK PATH
(FOR PATROL VEHICLES)

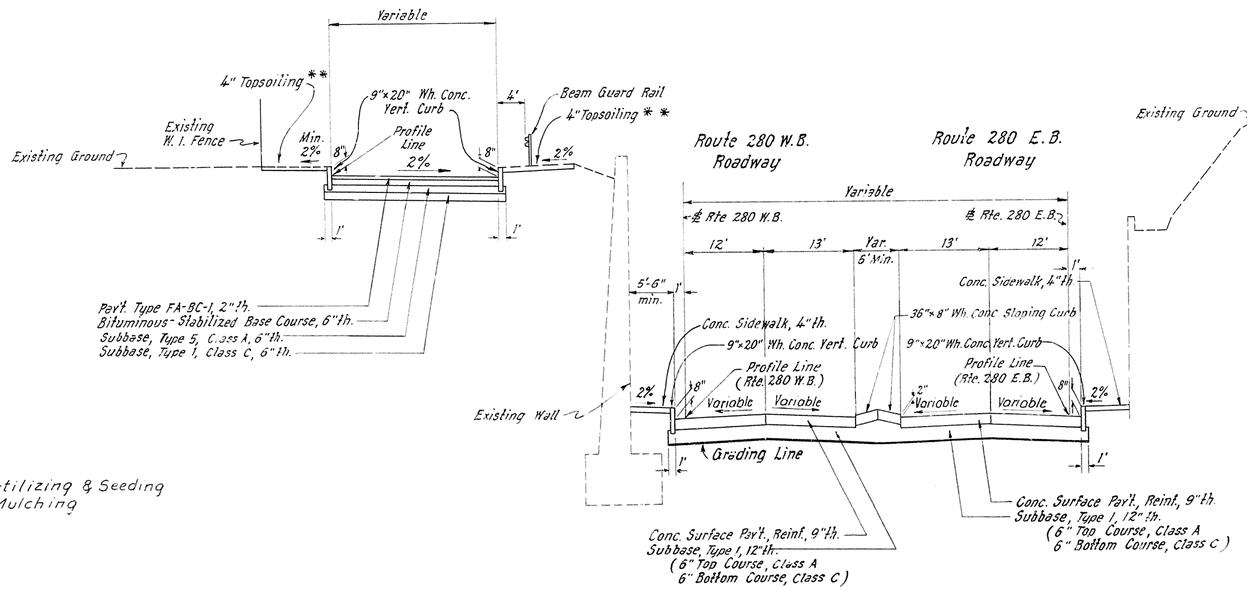


TYPICAL CROSS SECTION
PARK PATH ON EXISTING ROAD
(FOR PATROL VEHICLES)

NOTE:
Where existing road can not be retained as a base - use Subbase, Type 5, Class A, 6" th.



TYPICAL CROSS SECTION
STICKLE HIGHWAY TEMPORARY PAVEMENT
FOR DETOUR



TYPICAL CROSS SECTION - NORMAL - VICINITY RTE. 280 W.B. STA. 668 + 50

Note:
** - 4" Topsoiling, Fertilizing & Seeding Type A, & Hay Mulching

R. Larsen M. Nihan J. King

State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

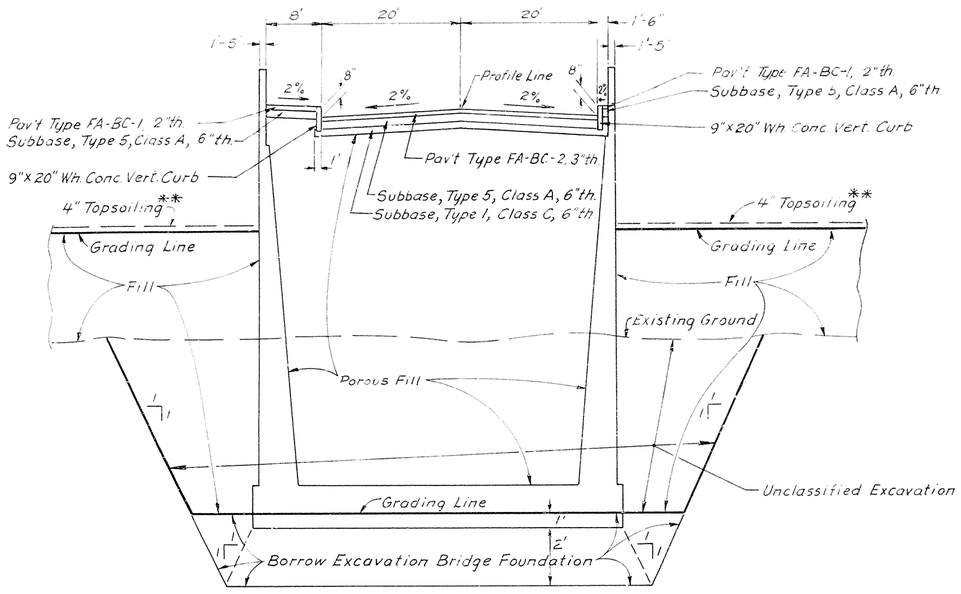
7/122

0731 007 127

SCALE: HOR. 1"= 10'
VERT. 1"= 5'

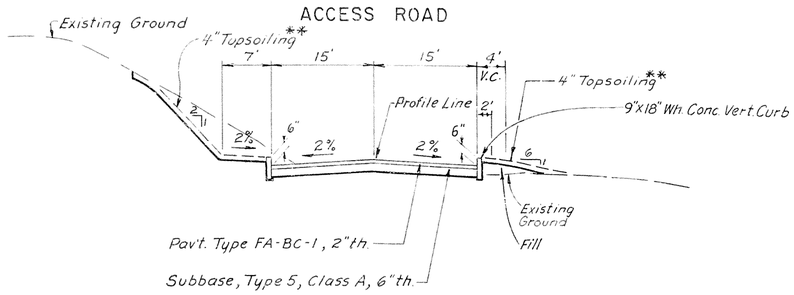
FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
	N.J.	I-J T-280-6(40)60	8	122

RELOCATED PARK ROAD

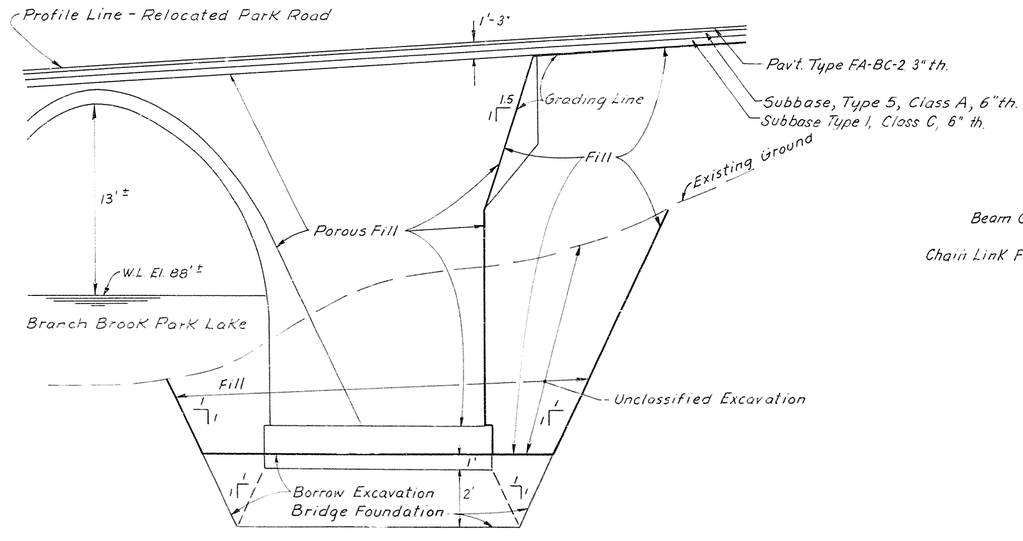


TYPICAL SECTION
RELOCATED PARK ROAD VICINITY CONCRETE ARCH BRIDGE

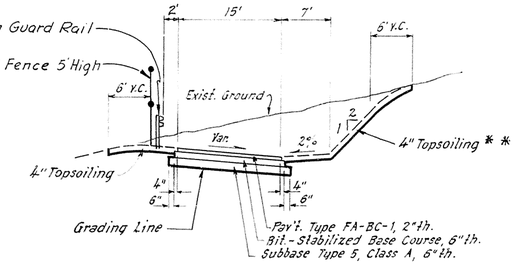
ACCESS ROAD



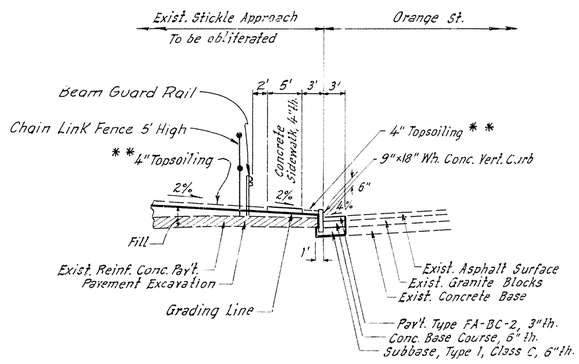
TYPICAL SECTION
ACCESS ROAD



PAYMENT LIMITS - UNCLASSIFIED EXCAVATION,
BORROW EXCAVATION, BRIDGE FOUNDATION & POROUS FILL
RELOCATED PARK ROAD VICINITY CONCRETE ARCH BRIDGE



TYPICAL SECTION - LACKAWANNA AVE.



TYPICAL SECTION - ALONG ORANGE ST.
VICINITY EXISTING STICKLE APPROACH

Note:
** - 4" Topsoiling, Fertilizing & Seeding.
Type A, & Hay Mulching

K.A. Larson
M. Bannworth
K.A. Larson

State Of New Jersey
Department Of Transportation
TYPICAL SECTIONS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

8
122

0731 008 127

FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	N.J.-I-280-6(140)160	9	122

ALIGNMENT DATA

POINT	STATION	COORDINATES NORTH	COORDINATES EAST
PCC "280 EB-15-16"	Route 280 Eastbound 654+2326	698,908.757	2,133,254.568
PCC "280 EB-16-17"	" " " 657+4582	698,848.977	2,133,520.039
PCC "280 EB-17-18"	" " " 658+65.82	698,806.441	2,133,632.231
PCC "280 EB-18-19"	" " " 659+45.82	698,775.312	2,133,705.925
PT "280 EB-19"	" " " 660+45.82	698,735.024	2,133,797.450
PC "280 EB-20"	" " " 664+31.87	698,577.725	2,134,150.005
PT "280 EB-20"	" " " 668+08.80	698,438.732	2,134,500.249
PCC "280 WB-17-18"	Route 280 Westbound 655+73.67	698,956.013	2,133,361.254
PCC "280 WB-18-19"	" " " 657+84.55	698,899.317	2,133,564.088
POC "280 WB" 6	" " " 658+15.17	698,888.318	2,133,592.669
PCC "280 WB-19-20"	" " " 658+59.55	698,871.676	2,133,633.805
PCC "280 WB-20-21"	" " " 659+34.55	698,842.201	2,133,702.769
PT "280 WB-21"	" " " 660+09.55	698,811.823	2,133,771.341
PC "280 WB-22"	" " " 664+77.64	698,620.624	2,134,198.605
PT "280 WB-22"	" " " 668+59.54	698,479.602	2,134,553.391
POC "PR"	Park Road "PR" 15+43.50	699,373.763	2,134,084.899
POT "E" 1	Ramp "E" 658+15.17	698,900.418	2,133,597.422
PC "E-1"	" " 662+85.84	698,728.309	2,134,035.498
PT "E-1"	" " 664+74.68	698,660.366	2,134,211.687
POT "E" 2	" " 668+53.75	698,526.204	2,134,566.222
PC "D-8"	Ramp "D" 655+23.26	698,894.217	2,133,302.837
PT "D-8"	" " 657+45.75	698,848.977	2,133,520.039
PC "PR1"	Park Road "PR" 10+52.62	699,523.719	2,133,680.418
PT "PR1"	" " " 12+47.74	699,382.201	2,133,805.379
POT "PR"	" " " 12+85.00	699,367.555	2,133,839.638
PC "PR2"	" " " 13+22.33	699,352.882	2,133,873.959
PT "PR2"	" " " 15+72.33	699,391.583	2,134,107.539
PC "AR1"	Road "AR" 10+00.00	699,373.763	2,134,084.899
PT "AR1"	" " 11+31.79	699,247.641	2,134,119.329
PC "AR2"	" " 12+37.71	699,141.837	2,134,124.289
PT "AR2"	" " 13+58.29	699,101.244	2,134,213.309

BENCH MARKS

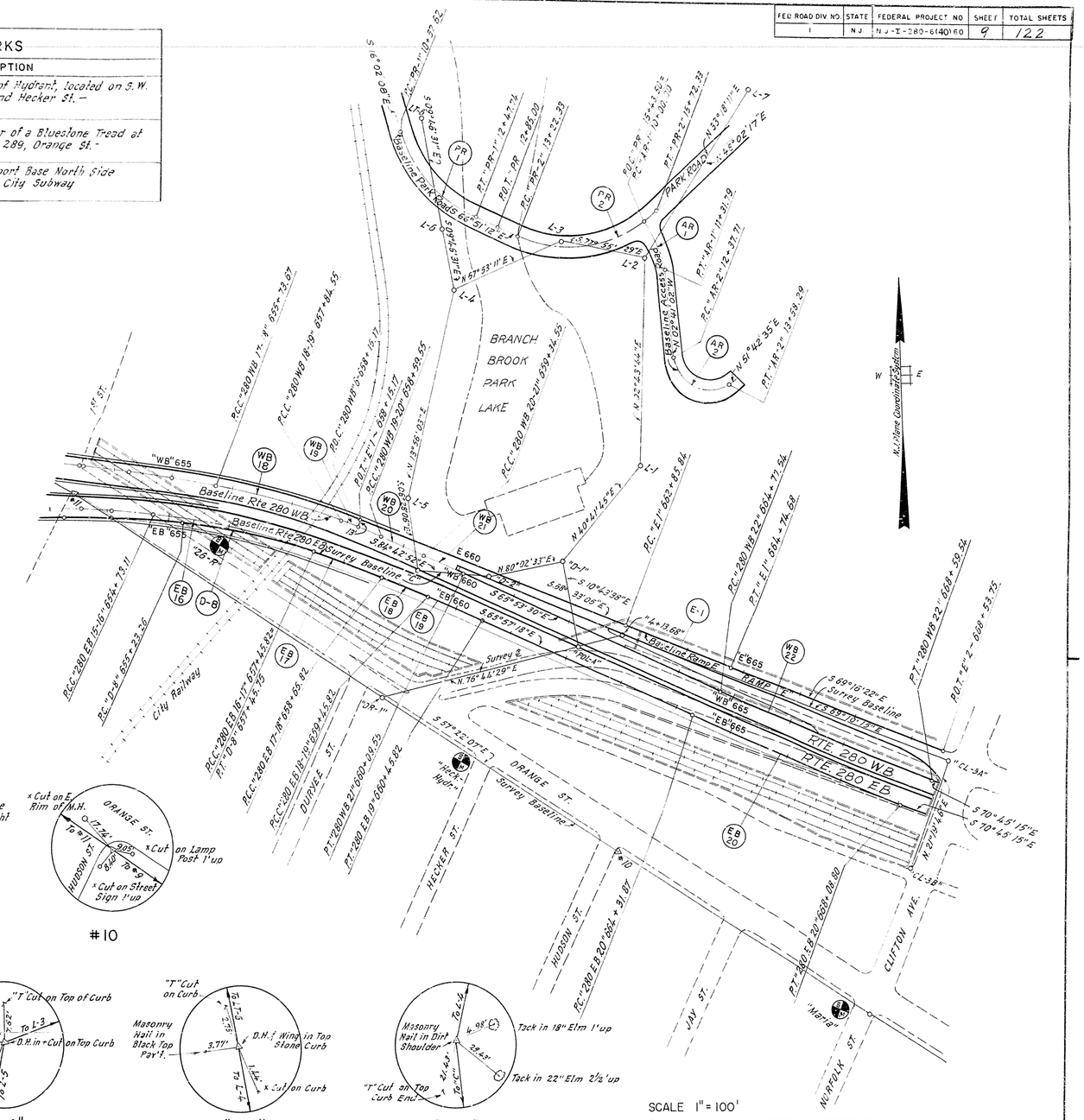
NAME	ELEV.	DESCRIPTION
"Heck. Hydr."	125.721'	X Cut on Northerly Bolt of Hydrant, located on S.W. Corner of Orange St. and Hecker St. - Newark, N.J.
"Maria"	115.601'	Angle Cut on S.W. Corner of a Bluestone Tread at Upstairs Entrance to # 289, Orange St. - Newark, N.J.
"26-R"	121.33'	□ Cut on Catenary Support Base North Side Orange St. 150' West of City Subway

SURVEY BASELINE DATA

POINT	COORDINATES NORTH	COORDINATES EAST
# 11	698,942.776	2,133,124.414
# 10	698,365.136	2,134,026.555
"OR-1"	698,615.942	2,133,634.854
"POL-A"	698,693.627	2,133,964.548
"4+13.68"	698,710.823	2,134,037.529
"CL-3A"	698,503.386	2,134,582.775
"CL-3B"	698,331.764	2,134,515.761
"D-1"	698,829.846	2,133,938.742
"D-2"	698,808.058	2,133,814.639
"C"	698,819.082	2,133,695.486
"L-1"	698,981.507	2,134,069.170
"L-2"	699,312.684	2,134,084.955
"L-3"	699,341.847	2,133,948.633
"L-4"	699,266.810	2,133,763.964
"L-5"	698,936.959	2,133,682.122
"L-6"	699,365.380	2,133,747.012
"LT-6"	699,542.775	2,133,716.503
"L-7"	699,585.524	2,134,264.198

CURVE DATA

CURVE	Δ	R	L	T	E	COORDINATES OF CENTER NORTH	COORDINATES OF CENTER EAST
EB-17	3°07'31"	2,200'	120.00'	60.02'	0.82'	696,771.360	2,132,796.500
EB-18	1°08'45"	4,000'	80.00'	40.00'	0.20'	695,106.294	2,132,112.720
EB-19	0°34'23"	10,000'	100.00'	50.00'	0.13'	689,602.767	2,129,722.911
EB-20	4°47'57"	4,500'	376.93'	188.57'	3.95'	702,687.241	2,135,983.547
WB-18	10°04'08"	1,200'	210.88'	105.71'	4.65	697,776.422	2,133,140.878
WB-19	1°57'12"	2,200'	75.00'	37.50'	0.32'	696,840.677	2,132,788.202
WB-20	1°04'27"	4,000'	75.00'	37.50'	0.18'	695,178.951	2,132,096.345
WB-21	0°25'47"	10,000'	75.00'	37.50'	0.07'	689,684.075	2,129,686.709
WB-22	4°51'45"	4,500'	381.90'	191.06'	4.05'	702,728.111	2,136,036.689
D-8	14°52'13"	857.25'	222.49'	111.87'	7.27'	698,039.417	2,133,238.106
E-1	0°43'17"	15,000'	188.84'	94.42'	0.30'	712,689.497	2,139,520.499
EB-16	13°01'14"	1,200'	272.70'	136.94'	7.79'	697,715.731	2,133,125.381
PR-1	50°49'03"	220'	195.13'	104.51'	23.56'	699,584.491	2,133,891.858
PR-2	65°06'31"	220'	250.00'	140.45'	41.01'	699,555.173	2,133,960.439
AR-1	25°10'15"	300'	131.79'	66.98'	7.39'	699,233.594	2,133,819.658
AR-2	125°36'23"	55'	120.57'	107.03'	65.34'	699,144.412	2,134,179.229


BRANCH BROOK PARK LAKE
PARK ROAD
Baseline Park Road
Baseline Access
Baseline Rte 280 WB
Baseline Rte 280 EB
Survey Baseline
Baseline Ramp E
RTE 280 WB
RTE 280 EB
ORANGE ST.
HECKER ST.
HUDSON ST.
CLIFTON AVE.
JAY ST.
NORFOLK ST.
DURYEE ST.
"WB" 655
"EB" 655
"WB" 665
"EB" 665
E 660
E 665
"26-R"
"Heck. Hydr."
"Maria"
"CL-3A"
"CL-3B"
"OR-1"
"D-1"
"D-8"
"E-1"
"4+13.68"
"POL-A"
PC "280 WB 22" 654+74.68
PT "280 WB 22" 658+53.75
PC "280 EB 20" 664+31.87
PT "280 EB 20" 668+08.80
PC "280 WB 21" 659+34.55
PT "280 WB 21" 660+09.55
PC "280 EB 19" 658+59.55
PT "280 EB 19" 659+34.55
PC "280 EB 18" 657+84.55
PT "280 EB 18" 658+15.17
PC "280 EB 17" 655+73.67
PT "280 EB 17" 656+23.26
PC "280 EB 16" 654+13.11
PT "280 EB 16" 655+73.67
PC "280 WB 17" 655+73.67
PC "280 WB 18" 657+84.55
PC "280 WB 19" 658+59.55
PC "280 WB 20" 659+34.55
PC "280 WB 21" 660+09.55
PC "280 WB 22" 664+77.64
PC "280 EB 20" 664+31.87
PT "280 EB 20" 668+08.80
PC "E" 662+85.84
PT "E" 664+74.68
POT "E" 2 668+53.75
PC "PR" 10+52.62
PT "PR" 12+47.74
POT "PR" 12+85.00
PC "PR" 13+22.33
PT "PR" 15+72.33
PC "AR" 10+00.00
PT "AR" 11+31.79
PC "AR" 12+37.71
PT "AR" 13+58.29
L-1
L-2
L-3
L-4
L-5
L-6
L-7
PR
PR 2
AR
AR 2
WB 18
WB 19
WB 20
WB 21
WB 22
EB 16
EB 17
EB 18
EB 19
EB 20
D-8
E-1
N 67°53'11" E
N 51°42'35" E
N 22°43'44" E
N 80°02'33" E
S 10°42'58" E
S 57°22'07" E
S 70°45'15" E
S 69°19'22" E
N 76°44'29" E
N 13°38'05" E
N 10°42'58" W
S 6°02'38" E
N 45°02'17" E
N 53°8'11" E
S 85°57'18" E
S 84°42'32" E
S 85°53'30" E
N 40°21'45" E
N 13°38'05" E
S 57°22'07" E
S 70°45'15" E
N 67°19'46" E
N 13°38'05" E
S 10°42'58" E
S 53°05'2" E
S 69°19'22" E
N 67°19'46" E
S 70°45'15

FED ROAD DIV NO	STATE	FEDERAL PROJECT NO.	SHEET	ETS
1	N J	NJ-I-280-6(140)60	15	

ORANGE ST
4-TH ST
3-RD ST
Existing PS N.J. Handhole
16" Pile
36" Water Mains
Control of Access Line
RAMP "B1"
RAMP "B"
RAMP "A"
W20-4 Sign Pole
N.J. plane coordinate system
Match Line to Rte. 280 E.B. Sta. 649+00
RTE. 280 W.B.
RTE. 75 N. To W.
RTE. 75 E. To S.
RTE. 280 E.B.
RAMP "D"
RAMP "C"
COLLECTOR ROAD
6-TH STREET
5-TH ST.
4-TH ST.
"B"641
"B"642
"B"643
"B"644
"B"645
"B"646
"B"647
"B"648
"B"649
"WB"640
"WB"641
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"EB"645
"EB"646
"EB"647
"EB"648
"EB"649
"A"647
"C"645
"C"646
"CR"108
"CR"109
"CR"110
"CR"111
"CR"112
"CH"109
BEGIN PROJECT
℄ ROUTE 280 E.B. STA. 647+40

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Sign Size 48"x 48"	Unit	1	

SCALE 1" = 30'

Prepared by PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
Made by C.A. Olsen Traced by M. Ichiara Checked by L. Bianco 2-71

State Of New Jersey
Department Of Transportation
PLAN SHEETS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

15/122

0731 015 127

FED ROAD DIV NO.	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	NJ	NJ-I-280-6(40)60	16	122

N.J. State Coordinate System

ERIE - LACKAWANNA R.R.

1ST. ST.

Asphalt on Conc.

Asphalt on Granite Block or Conc.

RTE. 280 W.B.

RTE. 280 E.B.

RAMP "A"

ROUTE 75 N. TO W.

ROUTE 75 E. TO S.

Baseline 650 651

Match Line to Rte. 280 E.B. Sta. 649+00

Match Line to Route 280 EB Sta. 656+50

Proposed R.O.W. Line

Survey Baseline

ACADEMY SPIRES

20 Sty. Br. Apt.

Sign Pole V-20-4

PCC "WB" Sta. 654+98.67

PCC "WB" Sta. 655+73.67

PC "D" Sta. 655+23.29

PCC "EB" Sta. 654+72.11

PT "D" Sta. 654+03.02

Baseline Rte 280 WB

Baseline Rte 280 EB

Pier 7

Pier 6

ORANGE ST.

Easement Line

VIADUCT SECTIONS
NOT IN CONTRACT

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Sign Size 48" x 48"	Unit	1	

SCALE 1" = 30'

State Of New Jersey
Department Of Transportation
PLAN SHEETS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

16/122

0731 016 127

FED ROAD DIV NO	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	NJ-I-280-6(40)60	17	122

TREE ABBREVIATIONS

A = Ailanthus
Ap = Apple
B = Butternut
Ba = Basswood
BB = Black Birch
BE = Box Elder
Bee = Beech
Bh = Beech
C = Cherry
D = Dogwood
E = Elm
GB = Grey Birch
H = Hawthorn
He = Hemlock
I = Iron Wood
M = Maple
Mb = Mulberry
O = Oak
P = Poplar
SE = Slippery Elm
T = Tulip
Un = Unidentified
W = Willow

"PR" Sta 12+03.20' Rt - "PR" Sta. 12+05/61' Lt.
Const. 81 L.F. 12" RCCP
2 Unit Inlet Type "B"
0.9 C.Y. Class C Concrete
4.0 L.F. Inlets, Additional Depth

"PR" Sta 15+48/30' Lt
Const. 1 Unit Reset Head

"PR" Sta. 15+72/20' Rt
Const. 1 Unit Inlet Type "B"

"PR" Sta 13+10/50' Lt - "PR" Sta 14+00 20' Lt.
Const. 100 L.F. 12" RCCP
1 Unit Inlet Type "B"
1 Unit Inlet Type "E"
0.9 C.Y. Class C Concrete
6.0 L.F. Inlets, Additional Depth

"AR" Sta. 10+58/3' Lt.
Const. 1 Unit Reset Head

"AR" Sta. 11+62/15' Rt.
Const. 6 L.F. 12" RCCP
1 Unit Inlet Type B
5.9 L.F. Inlets, Additional Depth

BRANCH BROOK PARK LAKE

BRIDGE TO BE CONSTRUCTED UNDER THIS CONTRACT

Existing Parking Area

Ruins

Limit of Grading

Const. 745 S.Y. Pav't Type FA-BC-1, 2" th.
Const. 610 L.F. 9"x18" Wh. Conc. Vert. Curb
Const. 15 L.F. 2" R.M. Cond. Type CUG
Const. 55 L.F. 2" R.M. Cond. Type CUG
Const. 313 L.F. 9"x18" Wh. Conc. Vert. Curb
Const. 640 L.F. 9"x18" Wh. Conc. Vert. Curb
Const. 55 L.F. 2" R.M. Conduit, Type CUG
Const. 33 S.Y. Pav't Type FA-BC-1, 2" th.
Const. 13 S.Y. Pav't Type FA-BC-1, 2" th.
Const. 175 L.F. 2" R.M. Conduit, Type CUG
Const. 2869 S.Y. Pavt Type FA-BC-2, 3" th
Const. 530 S.Y. Pav't Type FA-BC-1, 2" th.
Const. 254 S.Y. Pav't Type FA-BC-1, 2" th.
Const. 91 S.Y. Pav't Type FA-BC-1, 2" th.

Match to Sheet # 18

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Subbase Type I	C.Y.	505	
Subbase Type V	C.Y.	816	
Pavement Type FA-BC-2, 3" thick	S.Y.	2881	
Pavement Type FA-BC-1, 2" thick	S.Y.	1666	
Prime Coat	Gal.	797	
Class C Concrete	C.Y.	18	
12" Reinforced Concrete Culvert Pipe	L.F.	137	
Inlets, Type B *5-8' Heads	Unit	5*	
Inlets, Type E	Unit	1	
Reset Heads	Unit	2	
9"x18" White Concrete Vertical Curb	L.F.	1563	
2" Rigid Metalic Conduit, Type CUG	L.F.	420	
Manholes, Inlets and Catch Basin Additional Depth	L.F.	159	
Porous Fill	C.Y.	1868	
Subbase Outlet Drain	C.Y.	389	
6" Corrugated Metal Pipe	L.F.	142	
	L.F.	21	

LEGEND

● 200W-1 ... Location of Boring
S.D. ... Subbase Outlet Drain
✦ ... Lamp Poles - Out of Contract

Note: For Cross Sections see Sheets No 42 & 44

SCALE 1" = 30'

State Of New Jersey
Department Of Transportation
PLAN SHEETS
DRAINAGE & UTILITY
RELOCATION PLANS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

17/122

C.W. Koch M. Bannworth R.A. Larsen

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FED ROAD DIV NO	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	N.J.-I 280-6(40)30	18	122

"AR" Sta. 12+50/15' Lt. - "AR" Sta. 11+85/110' Rt.
Const. 175 L.F. 12" R.C.C.P.
1 Unit Inlet Type "B".
0.9 C.Y. Class C Concrete.

"AR" Sta. 14+60/ 90' Rt.
Const. 3 Units Reset Heads.

"AR" Sta. 15+00/ Lt.
Const. 1 Unit Reset Heads.

Match to Sheet #17

Flood Light - to be maintained

Const. 170 L.F. 9"x18" Wh. Conc. Vert. Curb.
Const. 67 S.Y. Pav't Type FA-BC-1, 2" th.

Limit of Grading

Meet Exist. Walk

Limit of Grading

Const. 55 L.F. 2" R.M. Cond. Type CUG.

P.T. "AR" 13+58.29

Const. 689 S.Y. Pav't. Type FA-BC-1, 2" th.

Const. 250 L.F. 9"x18" Wh. Conc. Vert. Curb.

Const. 30 L.F. 2" R.M. Cond. Type CUG.

Const. 575 S.Y. Pav't Type FA-BC-1, 2" th.

Meet Exist. Walk

Const. 30 L.F. 2" R.M. Cond. Type CUG.

Const. 15 L.F. 2" R.M. Cond. Type CUG.

Const. 280 S.Y. Pav't Type FA-BC-1 2" th.

Limit of Grading

Const. 15 L.F. 2" R.M. Cond. Type CUG.
Meet Exist. Walk

Limit of Grading

BRANCH BROOK PARK LAKE

Railway

Overflow Chamber
Not to be disturbed by this Contract

Boat House

Remove Walk

Reset Head

Match to Sheet #19

N 699,400
N 699,200
N 699,000
N 698,800

E 2,133,600
E 2,133,800
E 2,134,000
E 2,134,200

Note:
For Cross Sections See Sheets No. 44-46

LEGEND
S.D. Subbase Outlet Drain
★ Lamp Poles by Others (°c)

TREE ABBREVIATIONS

A = Ailanthus
Ap = Apple
B = Butternut
Ba = Basswood
BB = Black Birch
BE = Box Elder
Bee = Beech
Bh = Beech
C = Cherry
D = Dogwood
E = Elm
GB = Grey Birch
H = Hawthorn
He = Hemlock
I = Iron Wood
M = Maple
Mb = Mulberry
O = Oak
P = Poplar
SE = Slippery Elm
T = Tulip
Un = Unidentified
W = Willow

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Subbase Type V	C.Y.	306	
Reset Heads	Unit	4	
Pavement Type FA-BC-1, 2" thick	S.Y.	1611	
Prime Coat	Gal.	150	
Class C Concrete	C.Y.	0.9	
12" Reinforced Concrete Culvert Pipe	L.F.	175	
Inlets Type "B"	Unit	1*	
9"x18" White Concrete Vertical Curb	L.F.	420	
2" Rigid Metallic Conduit, Type CUG (Lighting Item)	L.F.	145	
Subbase Outlet Drain	L.F.	70	
6" Corrugated Metal Pipe	L.F.	6	

* 1-8" Heads

SCALE 1" = 30'

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ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
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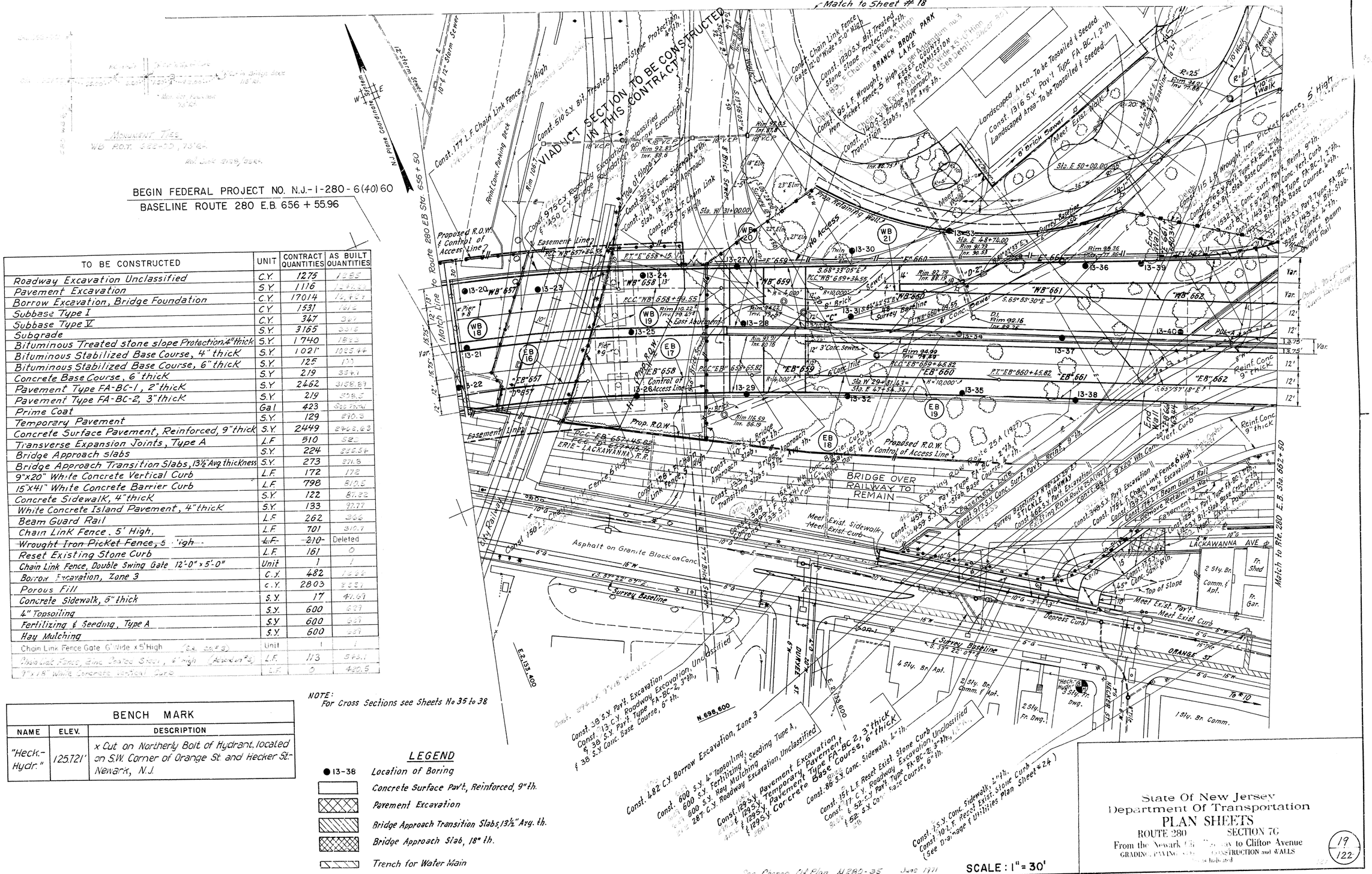
R.A. Larson
M. Arhan
C. Koch

0731 018 127

FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	N.J.-I-280-6(40)60	19	122

NOTE: THE "NO ACCESS" LINE ON THIS TRACING FROM STA. 658+50 TO 662+66, ON THE LEFT, HAS BEEN CHANGED TO AGREE WITH THE B.P.R. LATEST THINKING. DEC. 07-71 - WORK DONE IN NEWARK DESIGN OFFICE.

Match to Sheet # 18


BEGIN FEDERAL PROJECT NO. N.J.-I-280-6(40)60
BASELINE ROUTE 280 E.B. 656 + 55.96
MONUMENT TIES
W.B. P.O.T. 662+00, 75' Rt.
Rail Joint 8'ø Rt.
N.J. Plane Coordinates
Route 280 EB Sta 656 + 50
Match Line
Proposed R.O.W. & Control of Access Line
Easement Line
Const. 177 L.F. Chain Link Fence, 5' High
Reinf. Conc. Parking Deck
Const. 510 S.Y. Bit. Treated Stone Slope Protection, 4" th.
12" Storm Sewer
10" & 12" Storm Sewer
Rim 108.1'
VIADUCT SECTION TO BE CONSTRUCTED IN THIS CONTRACT
Const. 975 C.Y. Roadway Excavation, Unclassified
Const. 450 C.Y. Bridge Foundation Bor'g Excavation
Const. 35 S.Y. Conc. Sidewalk, 4" th.
Const. 114 S.Y. Bridge Approach Slab, 18" th.
Const. 73 L.F. Chain Link Fence, 5' High
Sta. W 31+00.00
Top of Slope
18" VCP
Rim 92.83 Inv. 88.6
Rim 95.65 Inv. 87.8
Rim 96.75
Const. Chain Link Fence, Gate 12'-0" Wide x 5'-0" High
Const. 1230 S.Y. Bit. Treated Stone Slope Protection, 4" th.
Const. 195 L.F. Wrought Iron Picket Fence, 5' High
Const. 1140 S.Y. Bridge Approach Transition Slabs, 13½" Avg. th.
BRANCH BROOK PARK LAKE
ESSEX COUNTY PARK COMMISSION
Landscaped Area - To be Topsoiled & Seeded
Const. 316 S.Y. Pav't. Type FA-BC-1, 2" th.
Landscaped Area - To be Topsoiled & Seeded
8" Brick Sewer
Meet Exist. Walk
Sta. E 50+00.00
Const. 1115 L.F. Wrought Iron Picket Fence, 5' High
Const. 216 S.Y. Pav't. Type FA-BC-1, 2" th.
Const. 216 S.Y. Bit. Stab. Base Course, 4" th.
Const. 1532 S.Y. Conc. Surf. Pav't. Reinf., 9" th.
Const. 1437 L.F. 9"x20" Wh. Conc. Vert. Curb
Const. 1434 S.Y. Pav't. Type FA-BC-1, 2" th.
Const. 1434 S.Y. Bit. Stab. Base Course, 4" th.
Const. 1434 S.Y. Pav't. Type FA-BC-1, 2" th.
Const. 1434 S.Y. Bit. Stab. Base Course, 4" th.
Const. Pav't. Type FA-BC-1, 2" th.
Const. Bit. Stab. Base Course, 4" th.
Const. Reinf. Conc. Surf. Pav't. 9" th.
Const. 9" Conc. Barrier Curb
Const. Guard Rail
Const. 90 L.F. Guard Rail
Const. 1128 S.Y. Conc. Surf. Pav't. Reinf., 9" th.
Const. 20" Vert. Curb
Reinf. Conc. 9" thick
Match to Rte. 280 E.B. Sta. 662+50
Const. 1175 L.F. Chain Link Fence 6' High
Const. 1733 S.Y. Pav't. Excavation
Const. 1761 L.F. Beam Guard Rail
Remove Retaining Wall
Const. 1265 S.Y. Pav't. Type FA-BC-1, 2" th.
Const. 1265 S.Y. Bit. Stab. Base Course, 4" th.
Const. Pav't.
Const. Bit. Stab.
Const. Pav't.
Const. Bit. Stab.
Const. Pav't.
Const. Bit. Stab

FED. ROAD DIV NO.	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	N.J.-I-280-6(40)60	20	122

BENCH MARK		
NAME	ELEV.	DESCRIPTION
"Maria"	115.601'	Angle Cut on S.W. Corner of Bluestone Tread at Upstairs Entrance to # 289, Orange St. - Newark, N.J.

Const. 18 S.Y. Pavement Excavation
Const. 18 S.Y. Temporary Pavement
Const. 18 S.Y. Pavement Type FA-BC-2, 3" thick
Const. 18 S.Y. Concrete Base Course, 6" thick

END FEDERAL PROJECT
NO. N.J.-I-280-6(40)60
℄ ROUTE 280 E.B. STA. 668+74.00

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Pavement Excavation	C.Y.	3894	3,818.4
Subbase Type 1	C.Y.	2094	2,053.4
Subbase Type 5	C.Y.	351	344.2
Subgrade	S.Y.	3742	3,668.8
Bituminous-Stabilized Base Course, 4"th.	S.Y.	1354	1,327.7
Bituminous-Stabilized Base Course, 6"th.	S.Y.	1282	1,257.3
Pavement Type FA-BC-1, 2" thick	S.Y.	2556	2,506.4
Prime Coat	Gal.	519	509.0
Concrete Surface Pavement, Reinforced, 9"th.	S.Y.	3433	3,366.0
Transverse Expansion Joints Type A	L.F.	392	384.3
9"x 20" White Concrete Vertical Curb	L.F.	2416	2,369.3
24"x Variable Height White Concrete Barrier Curb	L.F.	340	333.4
Concrete Sidewalk, 4" thick	S.Y.	210	205.9
White Concrete Island Pavement, 4" thick	S.Y.	99	97.1
Reset Existing Stone Curb	L.F.	68	66.7
Pavement Excavation	S.Y.	3894	3,818.4
Beam Guard 3 Rail	L.F.	415	406.9
Reset Wrought Iron Picket Fence	L.F.	530	Deleted
Wrought Iron Picket Fence, 5' High	L.F.	22	Deleted
Porous Fill	C.Y.	316	309.8
Temporary Pavement	S.Y.	309	302.9
Pavement Type FA-BC-2, 3" thick	S.Y.	309	302.9
Concrete Base Course, 6" thick	S.Y.	309	302.9
36"x 8" White Concrete Sloping Curb	L.F.	50	49.0
15"x 41" White Concrete Barrier Curb	L.F.	508	498.0
Pavement Surface Removal	S.Y.	1763	1,728.0

LEGEND

See preceding sheet.

Note:
For Cross Sections see Sheets № 39 to 41

* As Per Agreement № 3



See Bridge Drawing A 1430-35 June 1971

State Of New Jersey
Department Of Transportation
PLAN SHEETS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

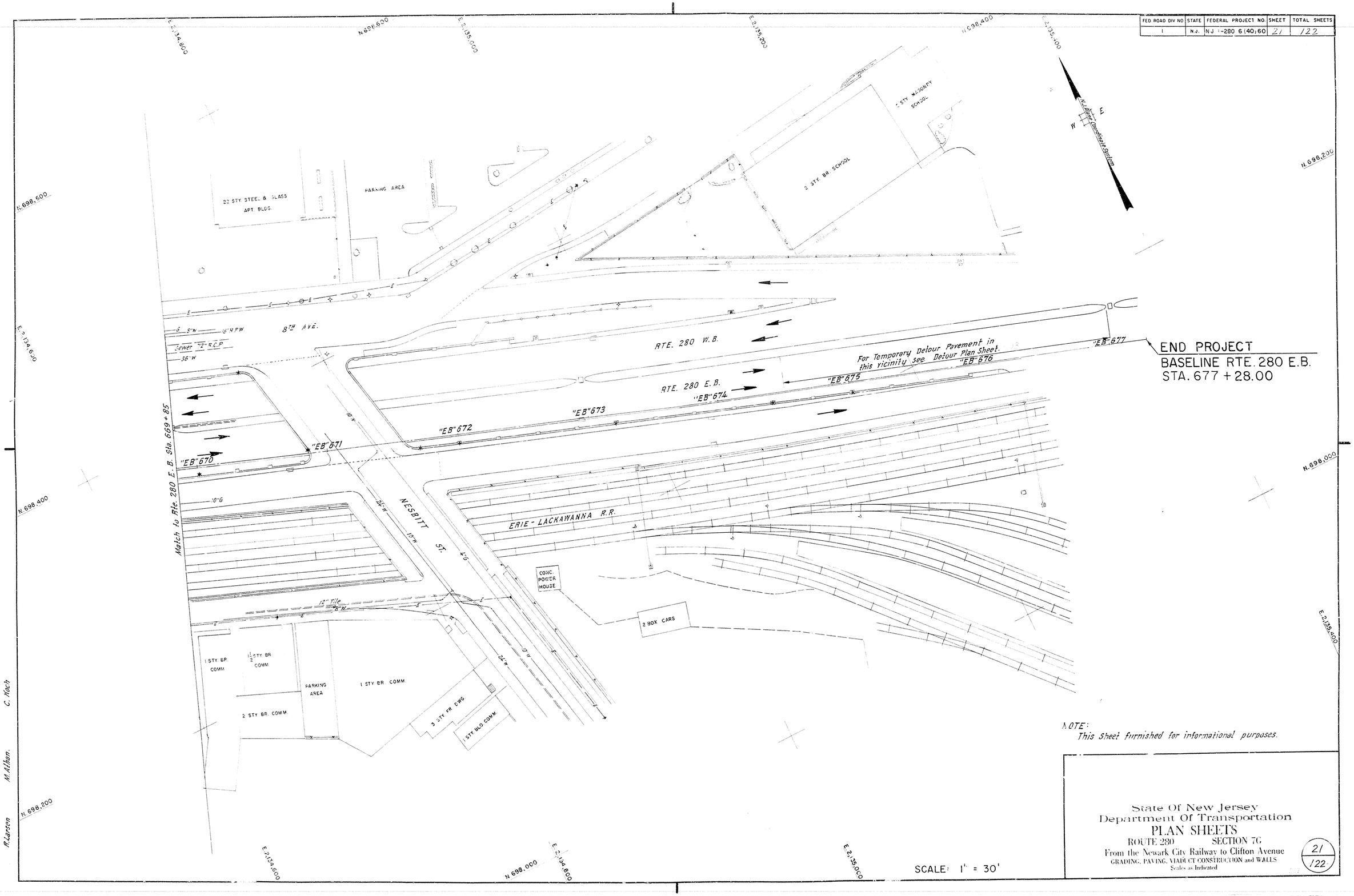
20
122

SCALE: 1" = 30'

C. Koch
M. Athan
R. Larsen

0731 020 127

FED ROAD DIV NO	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
I	N.J.	NJ I-280 6(40)60	21	122



SCALE: 1" = 30'

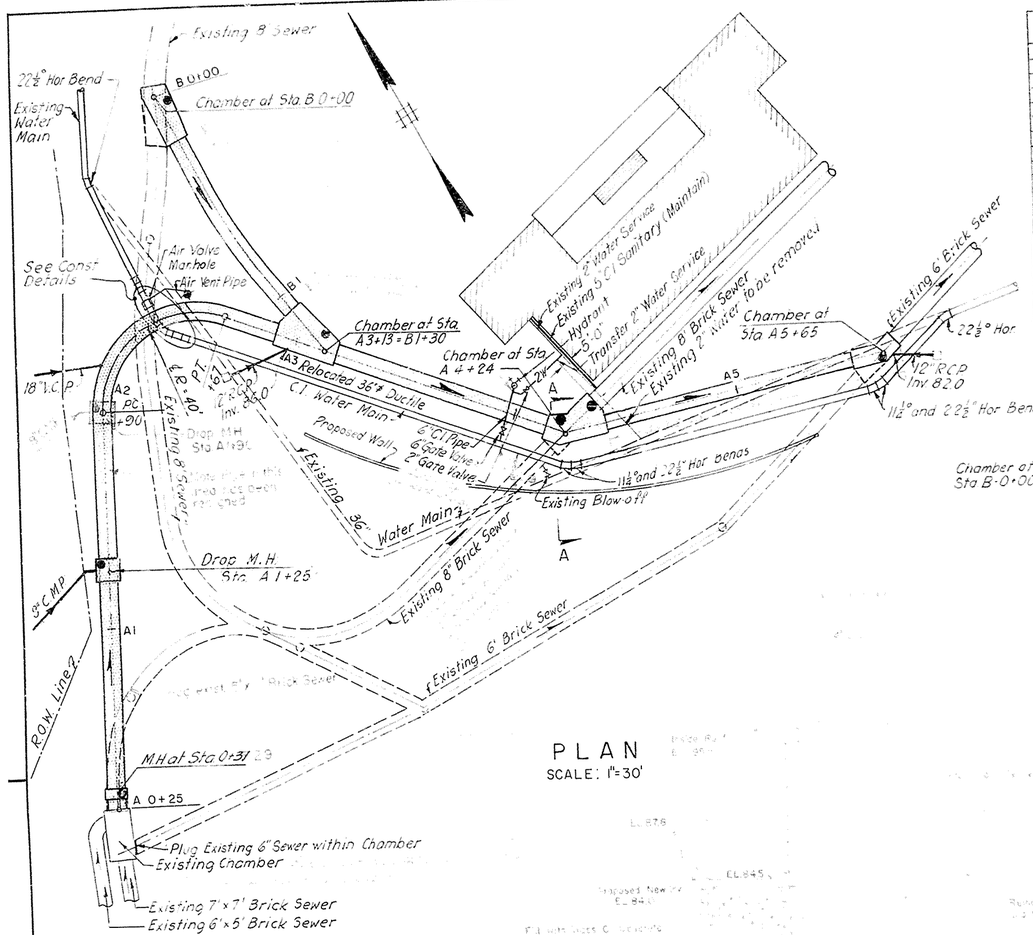
NOTE:
This sheet furnished for informational purposes.

State Of New Jersey
Department Of Transportation
PLAN SHEETS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

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FED ROAD DIV NO	STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
	N.J.	NJ-I-280 6(401)GO	22	122



PLAN
SCALE: 1"=30'

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
72" Dia. R.C.P. Class IV	L.F.	108	
96" Dia. R.C.P. Class IV	L.F.	252	
96" Dia. R.C.P. Class V	L.F.	95	
108" Dia. R.C.P. Class IV	L.F.	98	
Class C Concrete	C.Y.	2	
36" Dia. Ductile Cast Iron Pipe	L.F.	450	
Interconnections	Unit	2	
Drop Manhole At+25	L.S.	L.S.	
Air Valve Manhole	L.S.	L.S.	
36" Dia. Ductile C.I. Fittings	Tons	13.7	
Chamber at Sta. A 3+13	L.S.	L.S.	
Chamber at Sta. A4+24	L.S.	L.S.	
Chamber at Sta. B0+00	L.S.	L.S.	
Chamber at Sta. A5+65	L.S.	L.S.	
Manhole at Sta. A0+31	L.S.	L.S.	
6" Gate Valve and Box	Unit	1	
Install Hydrant (Newark Std.)	Unit		
Transfer of Existing 2" Water Service	Unit	1	
6" Cast Iron Water Pipe	L.F.	23	

Relocated Combined Sewer

Construct:
108 L.F. 72" Dia. R.C.P. Class IV
252 L.F. 96" Dia. R.C.P. Class IV
95 L.F. 96" Dia. R.C.P. Class V
98 L.F. 108" Dia. R.C.P. Class IV

Relocated 36" Dia. Water Main

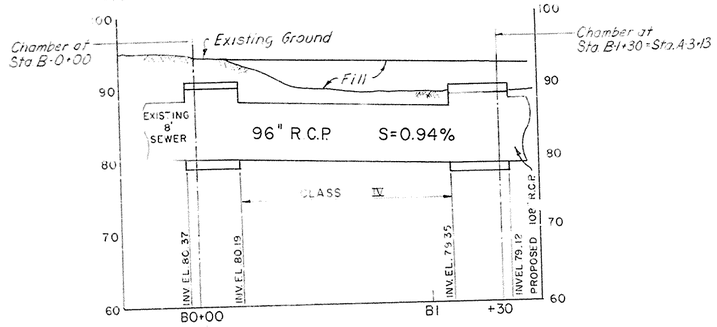
Construct

450 L.F. 36" Dia. Ductile Cast Iron Pipe
1 Unit Air Valve Manhole
2 Units Interconnections
13.7 Tons 36" Dia. Ductile C.I. Fittings

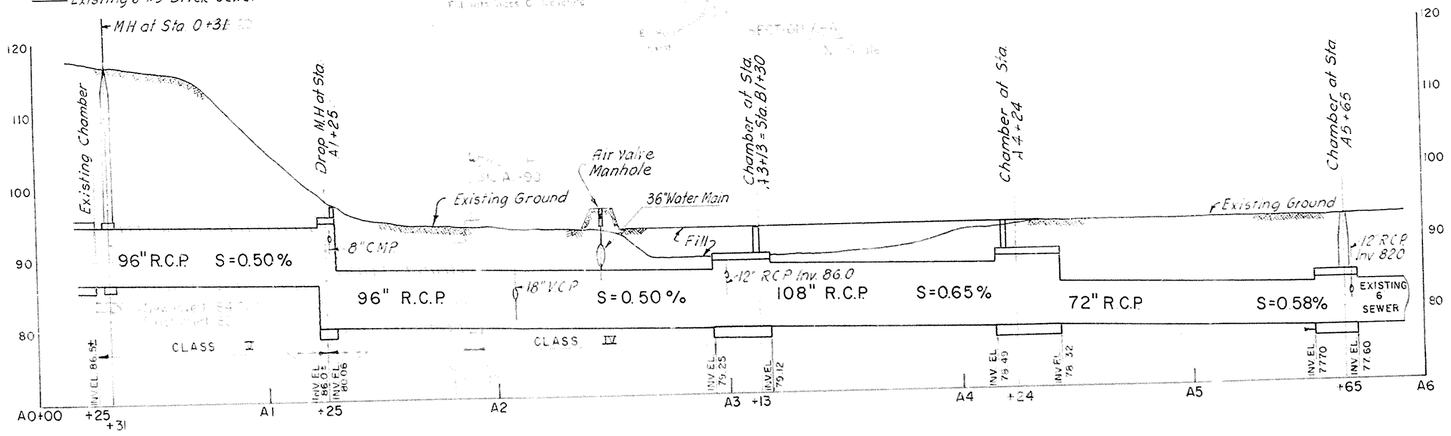
Drop M.H. at Sta. A 1+25
Construct Drop M.H as shown

Manhole at Sta. A 0+31
Construct M.H. as shown

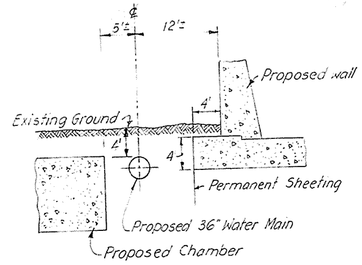
Chamber at Stations
A 3+13, A 4+24, B 0+00, A 5+65
Construct Chambers as shown



PROFILE B
SCALE: HOR. 1" = 30'
VER. 1" = 10'



PROFILE A
SCALE: HOR. 1" = 30'
VER. 1" = 10'



SECTION A-A
Scale 1"= 10'

PLAN
No Scale

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Scales as Indicated

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FED ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	NJ 1-280 6(40)60	23	122

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Reset Heads	Unit	1	
Subbase Outlet Drain	L.F.	65	
6" Corrugated Metal Pipe	L.F.	6	
12" Reinforced Concrete Culvert Pipe	L.F.	143	
15" Reinforced Concrete Culvert Pipe	L.F.	422	
8" Corrugated Metal Culvert Pipe	L.F.	145	
18" Clay Pipe, Extra Strength	L.F.	10	
Manhole with Trap	Unit	1	
Inlets, Type A	Unit	1	
Inlets, Type B	Unit	4 *	
Inlets, Type E with Trap	Unit	2	
6" Cast Iron Water Pipe	L.F.	25	
6" Gate Valves and Valve Boxes	Unit	1	
Install Hydrant Obtained from Newark Stock	Unit	1	
Interconnections	Unit	1	
20" Prestressed Concrete Water Pipe	L.F.	253	
20"x45° Conc. Bends for Prestressed Conc. Water Pipe	Unit	2	
20"x6" Conc. Tees for Prestressed Conc. Water Pipe	Unit	1	
20"x16" Conc. Reducers for Prestressed Conc. Water Pipe	Unit	2	
16" Gate Valves	Unit	1	
2" Rigid Metallic Conduit, Type CUG	L.F.	80	

* 2 - 10" Heads
2 - 6" Heads

Pipe Demolition

"EB" 658+80/155' Lt. to EB 659+07/165' Lt.
Construct:
28 L.F. 12" R.C.C.P.
1 Unit Inlet Type E with Trap

"EB" 661+60/154' Lt. to EB 661+86/154' Lt.
Construct:
20 L.F. 12" R.C.C.P.
1 Unit Inlet Type E with Trap

E-B 662+10/200' ± Lt.
Construct:
1 Unit Reset Head

"EB" 659+90/145' Rt. to "EB" 662+50/200' Rt.
(Water Supply)
Construct:
253 L.F. 20" Prestressed Concrete Water Pipe
2 Units 20" 45° Conc. Bends for Prestressed Conc. Pipe
1 Unit 20"x6" Conc. Tee for Prestressed Conc. Pipe
2 Units 20"x16" Conc. Reducers for Prestressed Conc. Pipe
1 Unit 6" Gate Valve
1 Unit 16" Gate Valve
25 L.F. 6" Cast Iron Pipe
1 Unit Relocation of Exist. Hydrant
1 Unit Interconnections

NOTE:
Thrust at bends, tees and plugs on prestressed concrete water pipe shall be taken by clamp type tied joints. See Specifications.

"EB" 657+70/5' Rt to "EB" 658+49/70' Lt.
Construct:
145 L.F. 8" C.M.C.P.
1 Unit Manhole with Trap

"EB" 658+28/165' Lt to "EB" 658+49/185' Lt.
Construct:
10 L.F. 18" C.P.E.S.

"EB" 659+10/35' Lt to "EB" 662+50/10' Rt.
Construct:
6 L.F. 6" C.M.P.
95 L.F. 12" R.C.C.P.
422 L.F. 15" R.C.C.P.
1 Unit Inlet Type "A"
4 Units Inlet Type "B"
65 L.F. Subbase Outlet Drain

LEGEND
- J.B. - Junction Box
- Lt. - Lighting Standard
- J.B.&Lt. - Junc. Box & Light Std.
- L.C. - Load Center
- J.B. - Junction Box - Bridge or Wall Item
- ⊡ - Standard Foundation, Traffic Signal Standard
- ⊠ - Meter Cabinet
- DR ⇨ Drainage Flow
- S.D. Subbase Outlet Drain
- ✱ - Lamp Poles, by others (o/c)
- % - Work done out of Contract by others

SCALE : 1" = 30'

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R.J. Larsen M. Athan C.W. Koch

0731 023 127

FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
I	N.J	NJ -280-6(40)60	24	122

"EB 666+85/160'Lt. to "EB 669+15/95' Lt.
(Water Supply)
Construct:
198 L.F. 36" Prestressed Concrete Water Pipe
3 Units 36" 45° Conc. Bends for Prestr. Conc. Water Pipe
0.5 Ton Cast Iron Fittings
2 Units Interconnections
3 Units Plugging & Capping (8", 20"ϕ, 30" sizes) each

"EB 662+50/200'Rt to "EB"668+65/315' Rt
(Water Supply) (Orange St.)
Construct:
638 L.F. 20" Prestressed Concrete Water Pipe
1 Unit 20"x20" Conc. Tees for Prestr. Conc. Water Pipe
2 Units 20"x16" Conc. Reduc. for Prestr. Conc. Water Pipe
1 Unit 16" Gate Valves
1 Unit Interconnections

"EB" 664+10/32' Rt
(Water Supply)
Construct:
1 Unit Remove Hydrant

"EB 662+50/10'Rt. to "EB"666-85/30'Lt.
Construct:
160 L.F. Subbase Outlet Drain
15 L.F. 6" C.M.P.
520 L.F. 15" R.C.C.P.
3 Units Inlets, Type "B"
4 Units Inlets, Type "D"
2 Units Reset Heads
For replacement pavement see Sheet #

"WB"668+35/20'Lt. to "WB"668+55/45'Lt.
Construct:
1 Unit Inlet Type "B"
18 L.F. 12" R.C.C.P.
2 Unit Reset Head

"EB"666+15/180'Lt to "EB"668+80/150'Lt.
(Water Supply)
Construct:
29 L.F. 20" Prestressed Concrete Water Pipe
12 L.F. 24" Prestressed Concrete Water Pipe
221 L.F. 30" Prestressed Conc. Water Pipe
2 Units 20" 45° Conc. Bends for Prest. Conc. Water Pipe
1 Unit 20"x20" Conc. Tees for Prest. Conc. Water Pipe
1 Unit 24"x20" Conc. Tees for Prest. Conc. Water Pipe
1 Unit 24"x24" Conc. Tees for Prestr. Conc. Water Pipe
3 Units 24"x20" Conc. Reducers for Prestr. Conc. Water Pipe
1 Unit 36"x30" Conc. Red. for Prestr. Conc. Water Pipe
1 Unit 30"x20" Conc. Red. for Prestr. Conc. Water Pipe
2 Units 20"x16" Conc. Red. for Prestr. Conc. Water Pipe
2 Units 16" Gate Valves
2 Units 20" Gate Valves
3 Units Interconnections

NOTE
Thrust at bends, tees and plugs on Prestressed Concrete Water Pipe shall be taken by clamp type tied joints. See Specifications

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Subbase Excavation etc. 152+ Pits	Cu. Yds.	11 Cu. Yds.	152+15
Subbase Outlet Drain	L.F.	160	157
6" Corrugated Metal Pipe	L.F.	15	15
15" Reinforced Concrete Culvert Pipe	L.F.	520	520
Inlets, Type "B"	Unit	4*	4
Inlets, Type "D"	Unit	4	4
Reset Heads	Unit	4	4
12" Reinforced Concrete Culvert Pipe	L.F.	18	18
[illegible]	Cu. Yds.	2	2.15
20" Prestressed Concrete Water Pipe	L.F.	667	667
24" Prestressed Concrete Water Pipe	L.F.	12	5.37
30" Prestressed Concrete Water Pipe	L.F.	221	220
36" Prestressed Concrete Water Pipe	L.F.	198	209
20" 45° Concrete Bends for Prestressed Concrete Pipe	Unit	2	2
36" 45° Concrete Bends for Prestressed Concrete Pipe	Unit	3	3
20"x20" Concrete Tees for Prestressed Concrete Pipe	Unit	2	2
24"x 20" Concrete Tees for Prestressed Concrete Pipe	Unit	1	1
24"x 24" Concrete Tees for Prestressed Concrete Pipe	Unit	1	1
20"x 16" Concrete Reducers for Prestressed Concrete Pipe	Unit	4	4
24"x 20" Concrete Reducers for Prestressed Concrete Pipe	Unit	3	3
30"x 20" Concrete Reducers for Prestressed Concrete Pipe	Unit	1	1
36"x 30" Concrete Reducers for Prestressed Concrete Pipe	Unit	1	1
Cast Iron Fittings	Ton	0.5	0
16" Gate Valves	Unit	3	3
20" Gate Valves	Unit	2	2
Interconnections	Unit	6	6
Plugging & Capping	Unit	3	3
[illegible]	Cu. Yds.	1	1
[illegible]	Cu. Yds.	3	1.81

LEGEND
- J.B. - Junction Box
- Lt. - Lighting Standard
- J.B. & Lt. - Junc. Box & Light. Std.
- L.C. - Load Center
- J.B. - Junction Box - Bridge or Wall Item
- ⊡ - Standard Foundation, Traffic Signal Standard
- ⊠ - Meter Cabinet
- S.D. - Subbase Outlet Drain

Prepared in the Office of: M. Athan, C.W. Koch
Made by: R.A. Jorgen

State Of New Jersey
Department Of Transportation
DRAINAGE & UTILITY
RELOCATION PLANS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

24
122

SCALE: 1" = 30'

0731 024 127

FED ROAD DIV NO	STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
I	N J	N.J.-I-280-6(40)60	25	122

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Signs, 30" X 30"	Unit	4	
Soil Stabilization Matting	S.Y.	1,200	

W1-2L Pole U-Post

W2-2 (Pole U-Post)

W1-2R Pole U-Post

W2-2 (Pole U Post)

Const. 1200 S.Y. Stabilization Matting

Limit Of Grading

Reset Head

Meet Exist Walk

Match to Relocated Park Road Cross Sections
Match to Auxiliary Road Cross Sections

Limit of Grading

Match to Relocated Park Road Cross Sections
Match to West Cross Sections

Limit of Grading

Limit of Grading

Limit of Grading

BRANCH BROOK PARK LAKE

E 2,133,800

SCALE: 1"=30'

Match to Sheet # 26

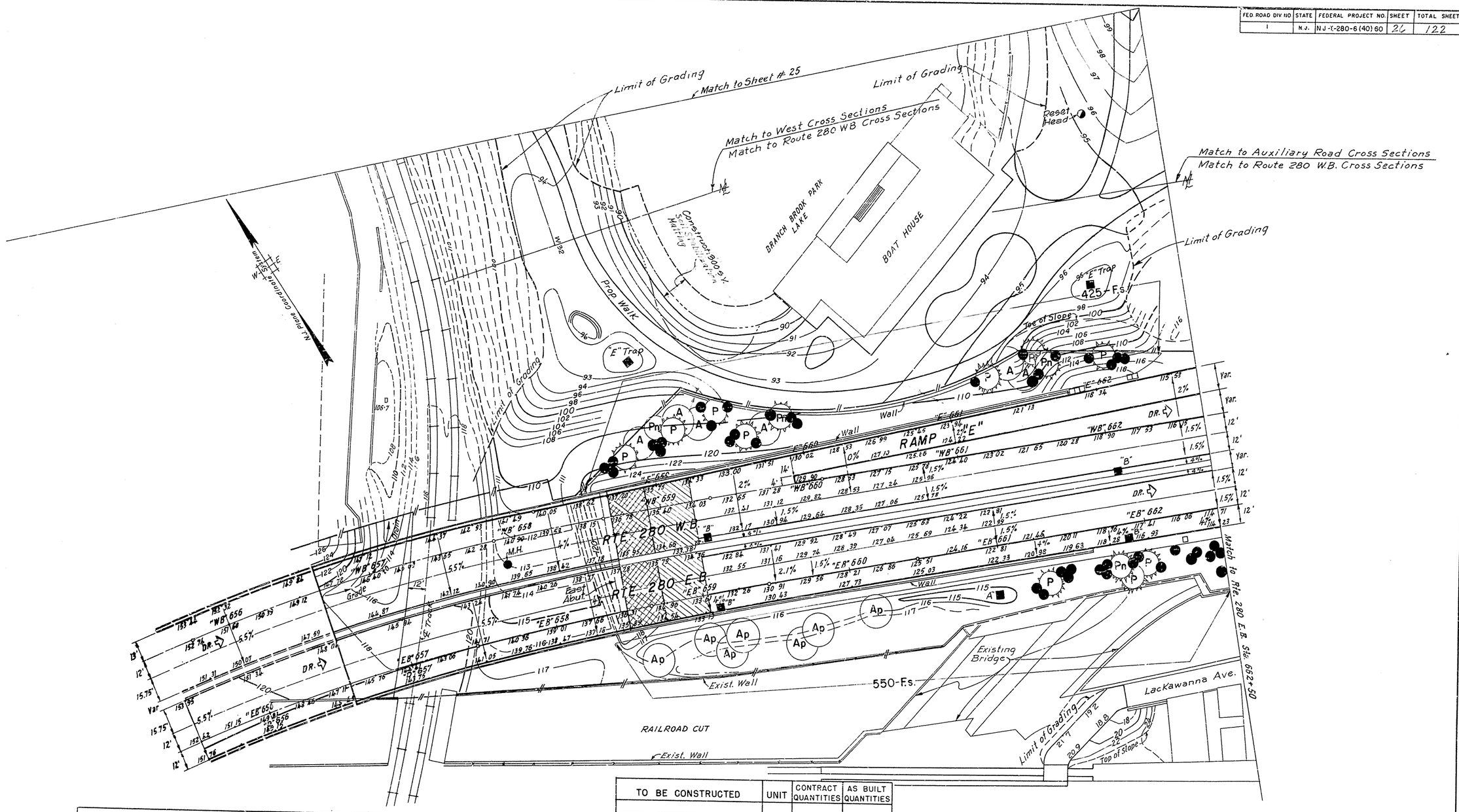
E. Daniels N. Bannworth R.A. Larson

State Of New Jersey
Department Of Transportation
GRADING, SIGNING & LANDSCAPING PLANS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

25/122

0731 025 127

FED. ROAD DIV NO	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
I	N.J.	NJ-I-280-6(40)60	26	122



		Root	Size Cal.	Size Ht.	Spacing	Plan Quantity	As-Built Quantity
A	Acer platanoides	B&B	2-2½"	12-14'		6	6
Ap	Acer platanoides Column	B&B	2-2½"	12-14'		7	7
P	Pinus nigra	B&B		7-8'		10	10
Pn	Pinus nigra	B&B		4-5'		4	4
●	Euonymus alatus	B&B		2-3'		42	42
F.s.	Forsythia intermedia Showy	BR		18-24"	5'	975	1235

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Delineators, Type I	Unit	1	1
Delineators, Type II	Unit	1	1
Delineators, Type III	Unit	1	1
Soil Stabilization Matting	S.Y.	900	92

DELINEATOR SYMBOLS

- □ TYPE I
- □□ TYPE II
- □□□ TYPE III

LEGEND

- Bridge Approach Transition Slab, 13½" Avg. th.
- Bridge Approach Slab, 18" th.
- DR. ⇨ Surface Drainage Flow

SCALE: 1"= 30'

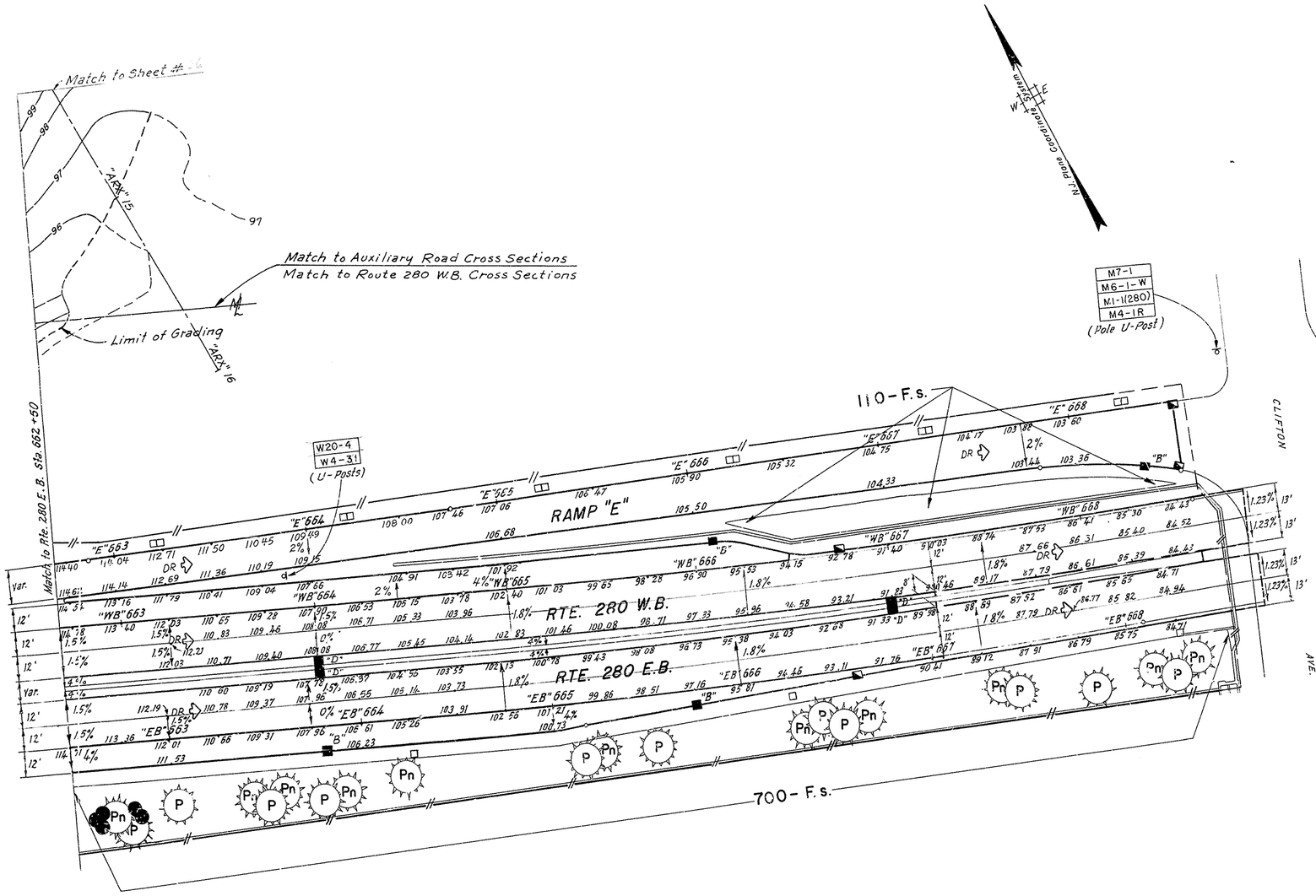
State Of New Jersey
Department Of Transportation
GRADING, SIGNING & LANDSCAPING PLANS
ROUTE 280 SECTION 7C
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

26/122

C. Koch M. Athan N. Larsen J. DOUGLAS

0731 026 127

FED ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	N.J.-I-280-6(40)60	27	122



		Root	Size Cal.	Size Hgt.	Spacing	Plan Quantity	As-Built Quantity
A	Acer platanoides	B&B	2-2½"	12-14'		—	—
Ap	Acer platanoides Columnar	B&B	2-2½"	12-14'		—	—
P	Pinus nigra	B&B		7-8'		11	11
Pn	Pinus nigra	B&B		4-5'		11	11
●	Euonymus alatus	B&B		2-3'		5	5
Fs.	Forsythia intermedia Showy	B/2		18-24"	5'	610	550
	Parthenocissus Tricuspidata Veitchi (Sym. #31)	Pots	2½ #1			100	100

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Sign Size 12"x 18"	Unit	3	3
Sign Size 12"x 24	Unit	3	3
Sign Size 15"x 21"	Unit	3	3
Sign Size 48"x48"	Unit	2	1
24" Shield	Unit	3	3
Delineators Type I	Unit	3	3
Delineators Type II	Unit	6	6

DELINEATOR SYMBOLS

- □ TYPE I
- □□ TYPE II
- □□□ TYPE III

SCALE: 1"= 30'

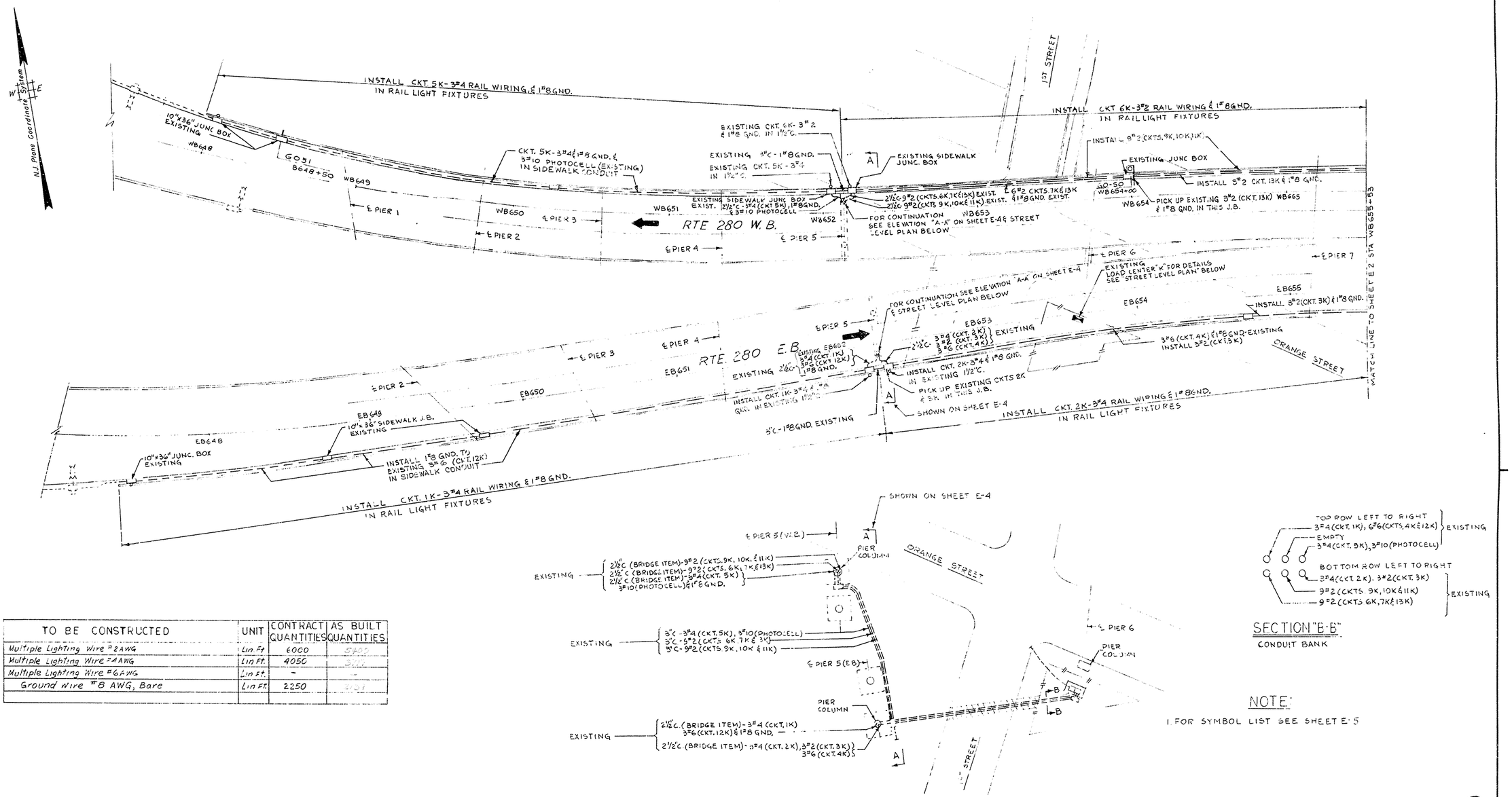
State Of New Jersey
Department Of Transportation
GRADING, SIGNING & LANDSCAPING PLANS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

27/122

R.A. Larson
M. Bennerth
E. Daniels

0731 027 127

FED ROAD DIV NO	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	NJ	NJ -280-6(40)60	28	122



SECTION "B-B"

CONDUIT BANK

STREET LEVEL PLAN

PLAN SCALE 1" = 30'

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Multiple Lighting Wire #2 AWG	Lin. Ft.	6000	
Multiple Lighting Wire #4 AWG	Lin. Ft.	4050	
Multiple Lighting Wire #6 AWG	Lin. Ft.	-	-
Ground Wire #8 AWG, Bare	Lin. Ft.	2250	

NOTE:

1. FOR SYMBOL LIST SEE SHEET E-5

E1

REVISION	BY	CHK.	DATE

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

28/122

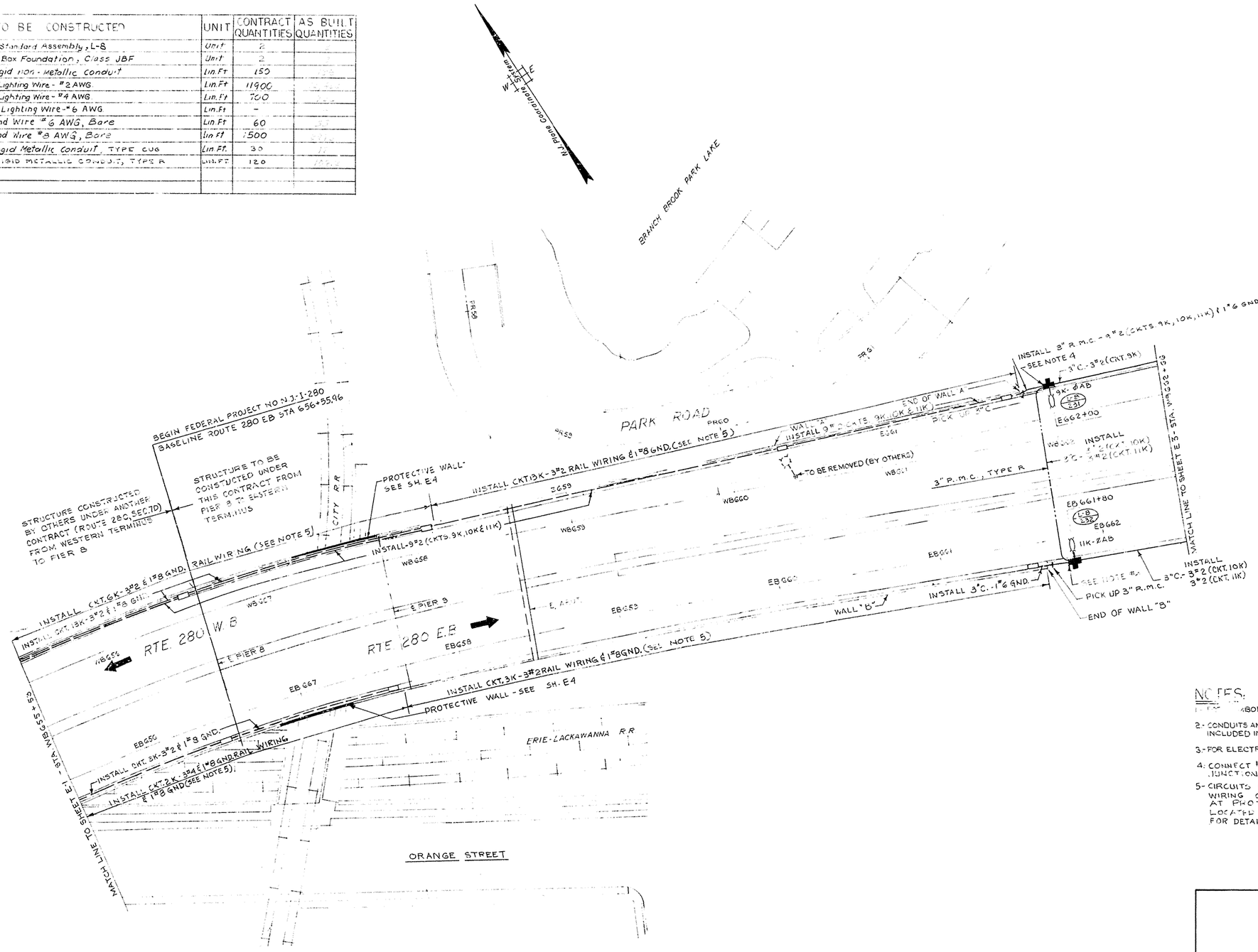
0130376 (CONST. ELEC.)

ROUTE 280 SECTION 7G

0731 028 127

FED ROAD DIV NO	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	N.J. 280 S(40)60	29	122

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Lighting Standard Assembly, L-8	Unit	2	
Junction Box Foundation, Class JBF	Unit	2	
3" Rigid non-metallic conduit	Lin.Ft	150	
Multiple Lighting Wire - #2 AWG	Lin.Ft	11900	
Multiple Lighting Wire - #4 AWG	Lin.Ft	700	
Multiple Lighting Wire - #6 AWG	Lin.Ft	-	
Ground Wire #6 AWG, Bare	Lin.Ft	60	
Ground Wire #8 AWG, Bare	Lin.Ft	1500	
3" Rigid Metallic Conduit, TYPE CUG	Lin.Ft.	30	
3" RIGID METALLIC CONDUIT, TYPE R	LIN.FT	120	



NOTES:

1- FOR SYMBOL LIST SEE SHEET E-5

2- CONDUITS AND SIDEWALK JUNCTION BOXES IN VIADUCT SAFETY WALKS ARE INCLUDED IN BRIDGE ITEMS

3- FOR ELECTRICAL WORK IN VIADUCT SEE SHEETS E 4, B11, B12, B13, B31 & B37

4- CONNECT #6 GROUND WIRE TO GROUND ROD IN THESE JUNCTION BOXES.

5- CIRCUITS DESIGNATED AS RAIL WIRING ARE LOCATED IN WIRING COMPARTMENT OF ILLUMINATED RAIL EXCEPT AT PROTECTIVE WALLS WHERE THE CIRCUIT IS ALSO LOCATED IN CONDUITS AND JUNCTION BOXES IN THE PARAPET FOR DETAILS SEE SHEETS E5 & B32

E2

PLAN SCALE: 1" = 30'

REVISION	BY	CHK.	DATE

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

29/122

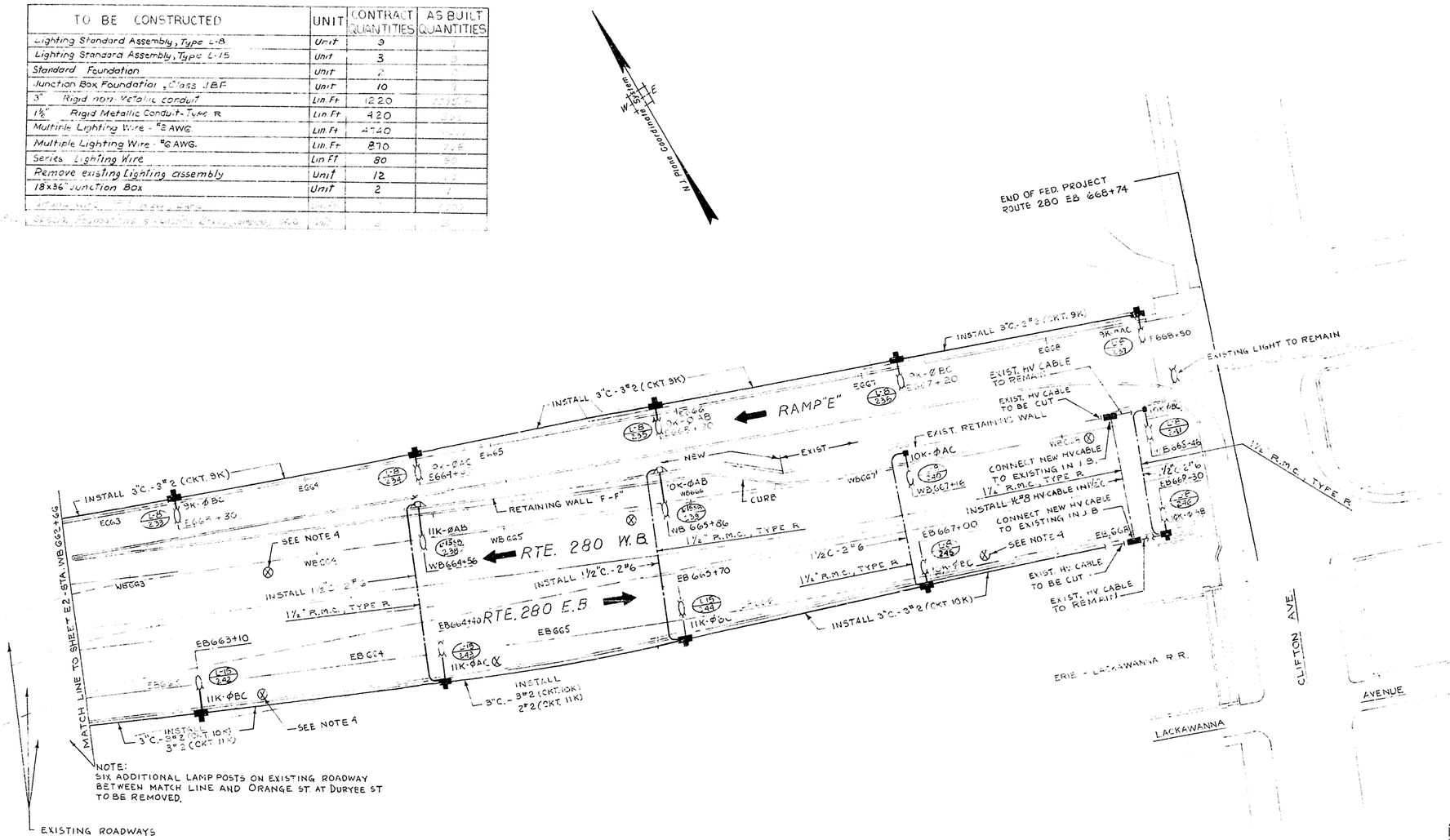
0730376 (CONST ELEC.)

ROUTE 280 SECTION 7G

0731 029 127

FED ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
I	NJ	NJ I 280 6(40)60	30	122

TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITIES	AS BUILT QUANTITIES
Lighting Standard Assembly, Type L-8	Unit	9	
Lighting Standard Assembly, Type L-15	Unit	3	
Standard Foundation	Unit	2	
Junction Box Foundation, Class J.B.F.	Unit	10	
3" Rigid non-Metallic conduit	Lin.Ft	1220	
1½" Rigid Metallic Conduit-Type R	Lin.Ft	420	
Multiple Lighting Wire - #2 AWG.	Lin.Ft	4740	
Multiple Lighting Wire - #6 AWG.	Lin.Ft	870	
Series Lighting Wire	Lin.Ft	80	
Remove existing Lighting assembly	Unit	12	
18x36" Junction Box	Unit	2	



NOTE:
SIX ADDITIONAL LAMP POSTS ON EXISTING ROADWAY BETWEEN MATCH LINE AND ORANGE ST. AT DURYEE ST TO BE REMOVED.

NOTES:

1.- FOR SYMBOL LIST SEE SHEET E-5
2.- FOR ELECTRICAL WORK IN RETAINING WALL SEE SHEET B-31
3.- CONDUITS IN RETAINING WALL ARE INCLUDED IN BRIDGE ITEMS.
4.- LAMP POSTS INDICATED THUS: ⊗ ARE EXISTING TO BE REMOVED
5.- ALL JUNCTION BOX FOUNDATIONS SHALL BE CAST IN PLACE WHEN IN SIDEWALK AREAS.

E3

PLAN SCALE: 1" = 30'

REVISION	BY	CHK.	DATE

State Of New Jersey
Department Of Transportation
ELECTRICAL PLANS
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

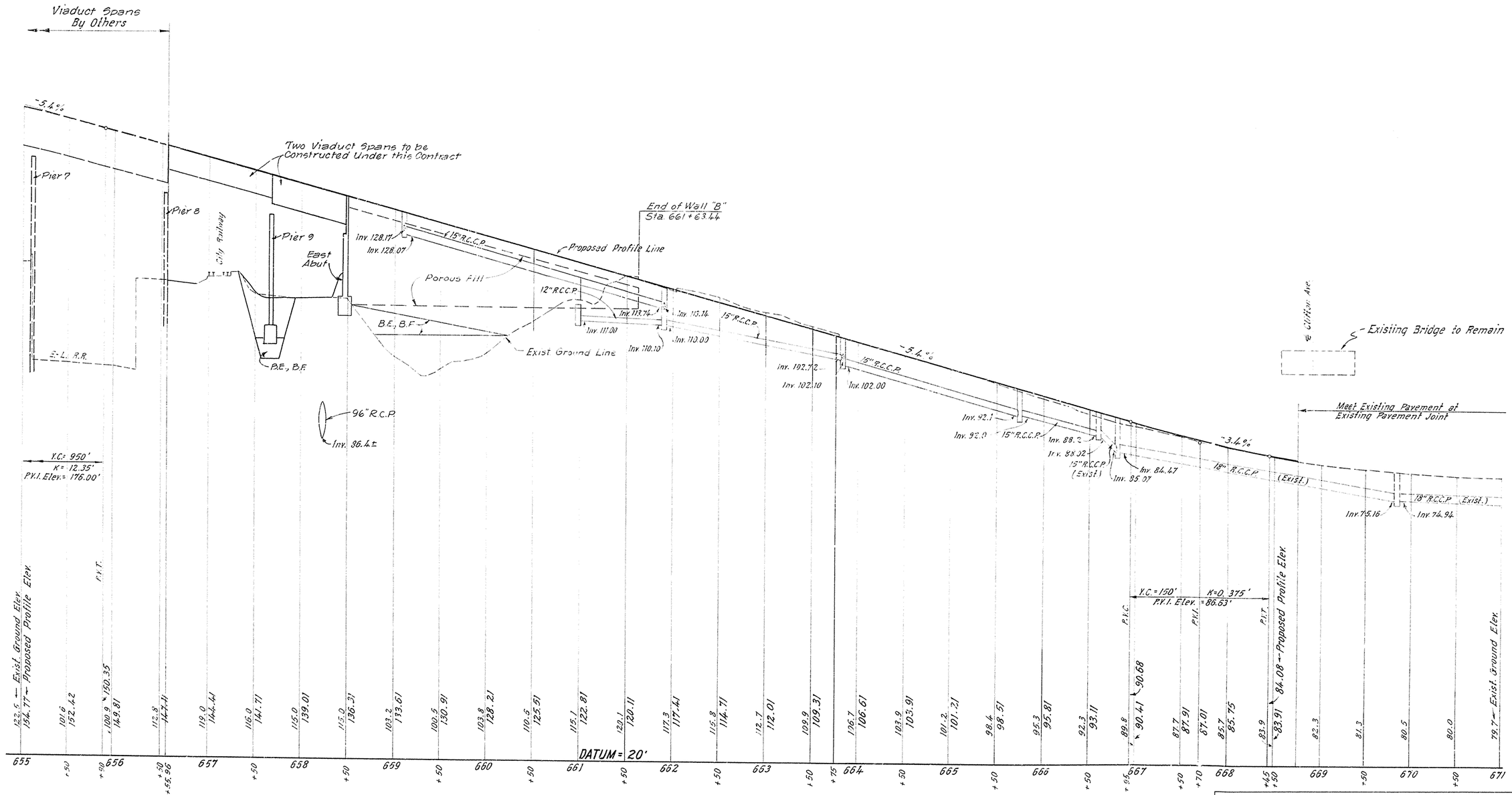
30
122

0730376 (CONST ELEC.)

0731 030 127

SCALE: HOR. 1"=50'
VERT. 1"=10'

FED ROAD DIV NO	STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
1	NJ	NJ - -280-6(40)80	31	122



PROFILE - ROUTE 280 EASTBOUND

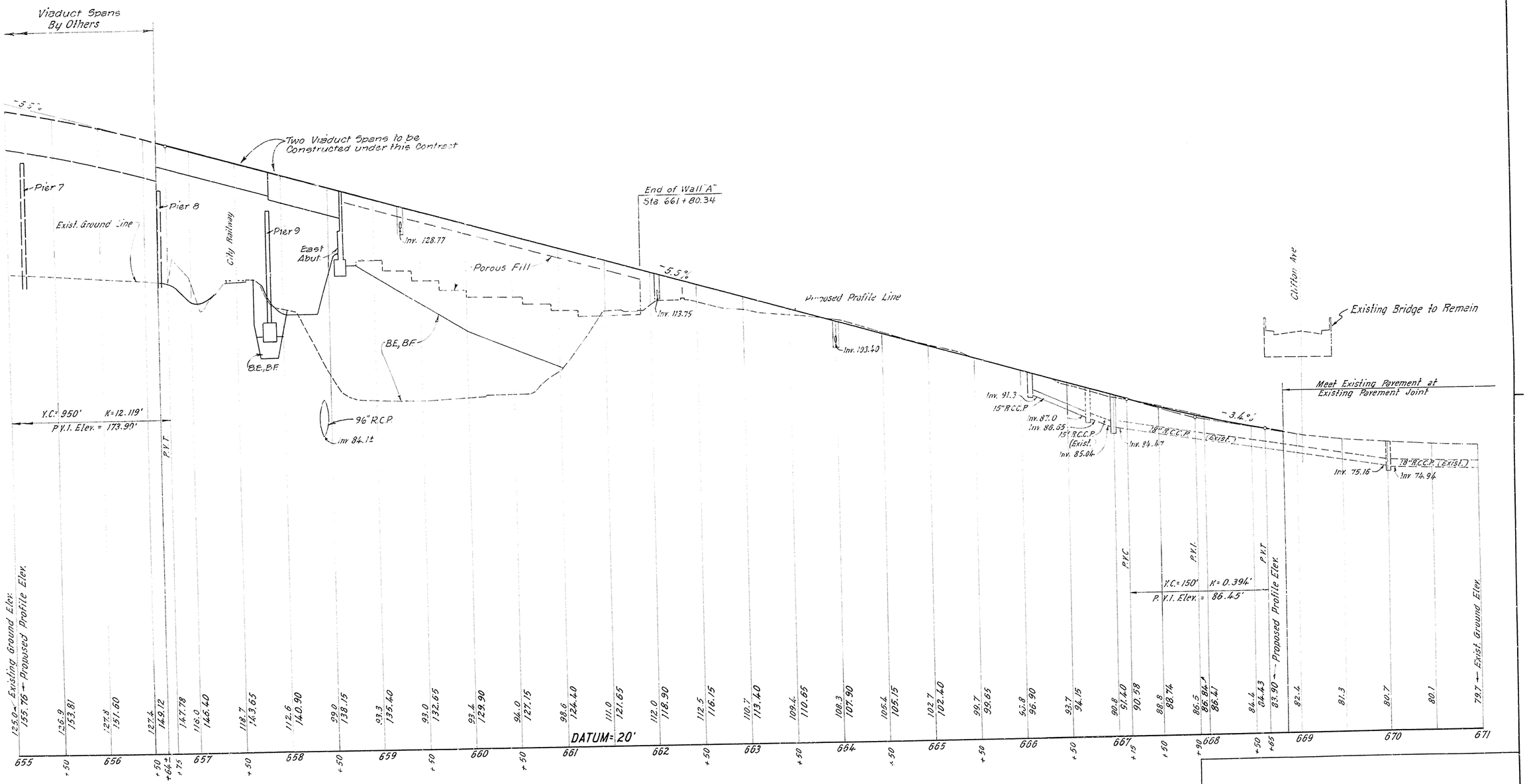
State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION

31
122

0731 031 127

FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
1	N.J.	NJ " 280-6(140' 60	32	122

SCALE: HOR. 1"=50'
VERT. 1"=10'



PROFILE - ROUTE 280 WESTBOUND

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

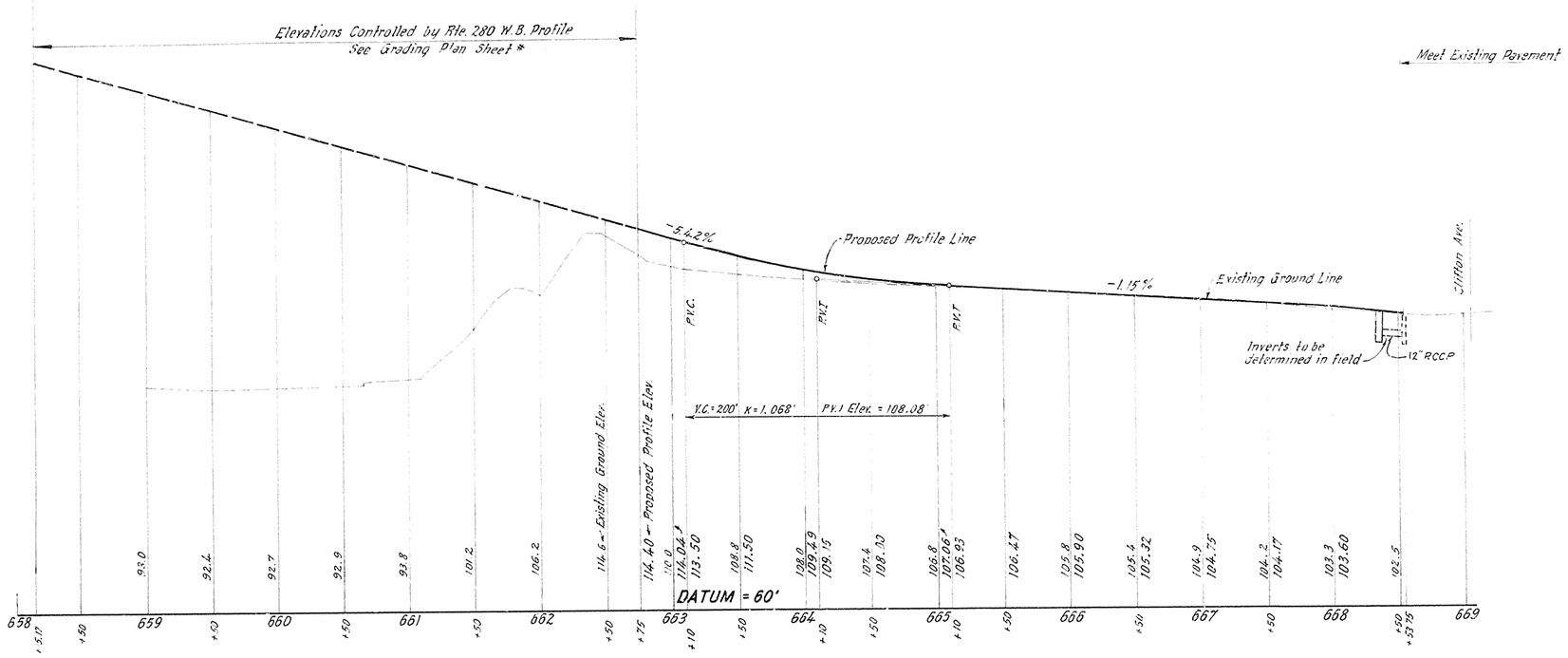
32
122

0731 032 127

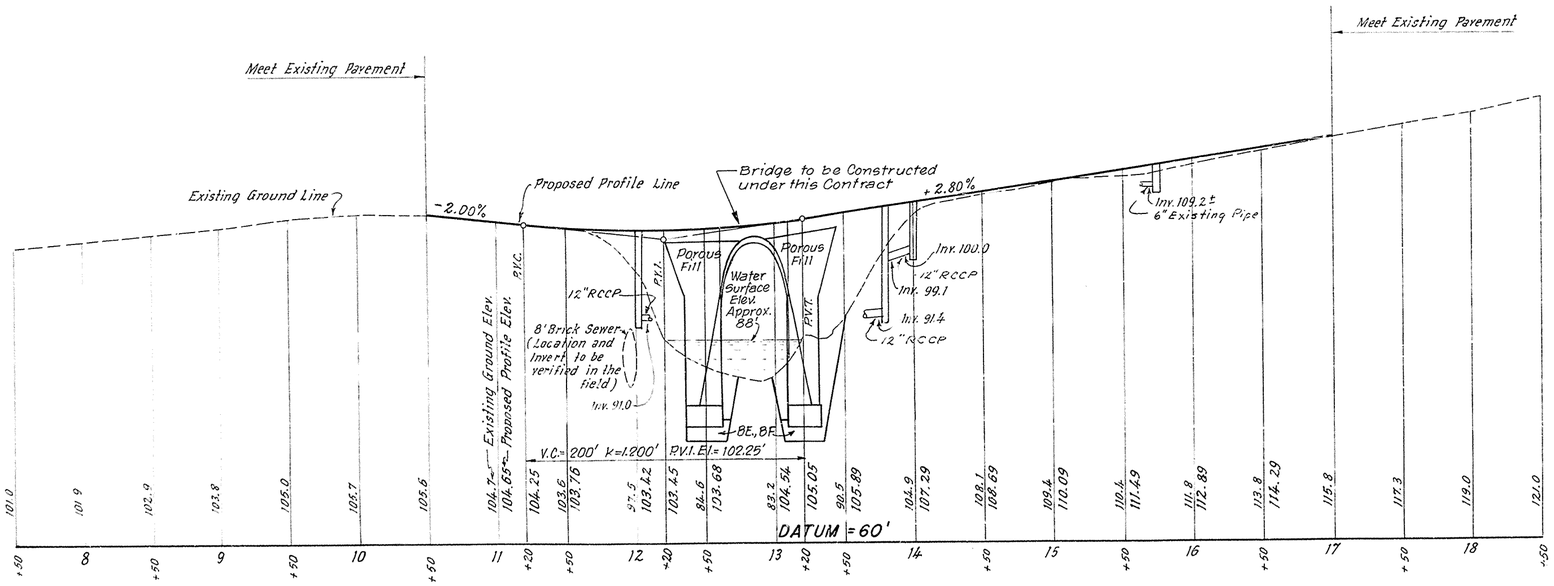
FED ROAD DIV NO	STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
1	N J	NJ-I-280-6(40)60	33	122

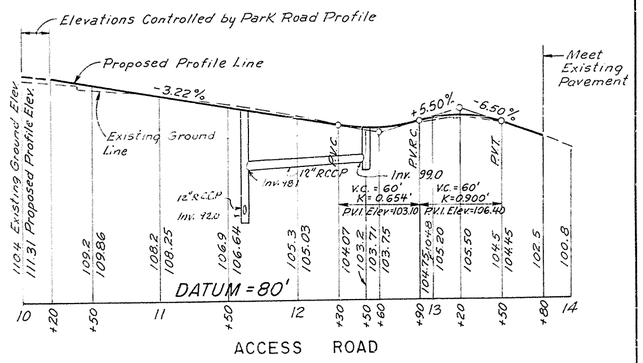
SCALE: HOR. 1" = 50'
VERT. 1" = 10'

Ramp "E" Sta. 658 + 15.17
Rte. 280 W.B. Sta. 658 + 15.17 / 13' Lt.



PROFILE - RAMP "E"





ACCESS ROAD

PROFILE PARK ROAD

C.M. Acker
M. Arhan
A. Larsen

State Of New Jersey
Department Of Transportation
PROFILES
ROUTE 280 SECTION 7G
From the Newark City Railway to Clifton Avenue
GRADING, PAVING, VIADUCT CONSTRUCTION and WALLS
Scales as Indicated

33
122

0731 033 127

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	1	97

UTILITIES
PUBLIC SERVICE ELECTRIC & GAS CO. - ELECTRIC
PUBLIC SERVICE ELECTRIC & GAS CO. - GAS
BELL ATLANTIC CORP. - TELEPHONE
CABLEVISION OF NEWARK - CABLE TV
CITY OF NEWARK - WATER
CITY OF NEWARK - SANITARY SEWER
CITY OF NEWARK - FIRE ALARM
CITY OF NEWARK - POLICE DEPT. (ABANDONED)

State of New Jersey
Department of Transportation

PLANS OF

ROUTE 280 SECTION 7AA

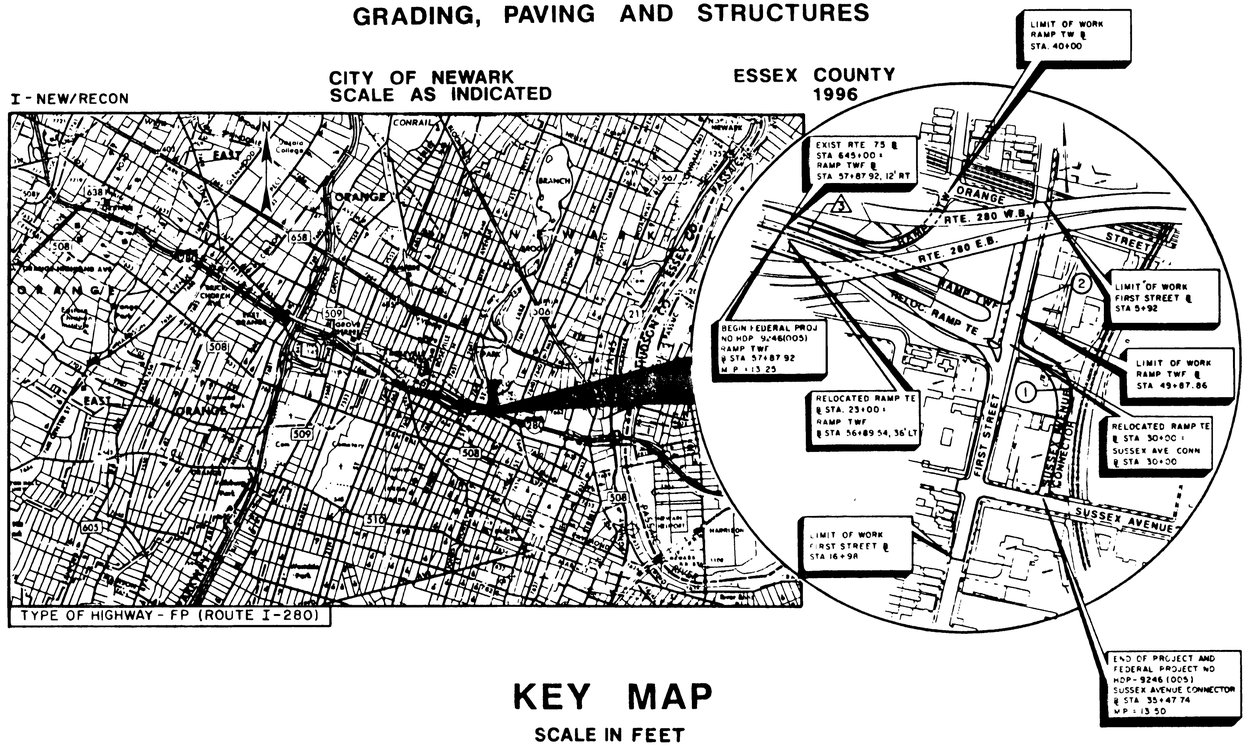
RAMP IMPROVEMENTS AT FIRST STREET

GRADING, PAVING AND STRUCTURES

I - NEW/RECON

CITY OF NEWARK
SCALE AS INDICATED

ESSEX COUNTY
1996



KEY MAP

SCALE IN FEET

2640 1320 2640 5280

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	KEY
1A	ESTIMATE-DISTRIBUTION OF QUANTITIES
2 - 5	TYPICAL SECTIONS
6	PLAN SHEET INDEX & BORING PLAN
7	LEGEND
8 - 10	CONSTRUCTION PLANS
11 - 13	DRAINAGE AND SOIL EROSION PLANS
14 - 16	PROFILES
17 - 18	TIES
19 - 21	GRADES
22 - 29	ELECTRICAL PLANS
30 - 33	TRAFFIC STRIPING AND SIGNING PLANS
34	LANDSCAPE PLAN
35 - 37	CONSTRUCTION DETAILS
38	METHOD OF CROSS SECTIONS
39 - 61	CROSS SECTIONS
62 - 81	TRAFFIC CONTROL PLANS
82 - 97	BRIDGE PLANS

STANDARD ROADWAY CONSTRUCTION / TRAFFIC CONTROL / BRIDGE DETAILS BOOKLET DATED SEPT., 1995 AND ELECTRICAL BUREAU STANDARD DETAILS (1995) ARE APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

AS-BUILT PLANS

WALLS IN THIS CONTRACT	
①	WALL NO. 1 ON SUSSEX AVENUE CONNECTOR
②	WALL NO. 2 ON FIRST STREET

SIGN SUPPORT STRUCTURES IN THIS CONTRACT	
⚠	OVERHEAD SIGN STRUCTURE

DESIGN TRAFFIC DATA - FIRST ST. (BET. RAMP TE AND SUSSEX AVE.)	
ADT (1995) - 2 WAY	24,380
ADT (2015) - 2 WAY	29,760
DHV (2015) - 2 WAY	3,410
D	69.5%
T	3.5%
V	30 M.P.H.

DESIGN TRAFFIC DATA - I-280 RAMP TE	
ADT (1995) - 1 WAY	25,520
ADT (2015) - 1 WAY	31,140
DHV (2015) - 1 WAY	3,280
D	100 %
T	3.5%
V	40 M.P.H.

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THIS PROJECT HAS BEEN CONSTRUCTED IN CONFORMITY WITH THE FINAL APPROVED CONSTRUCTION DRAWINGS, SPECIFICATIONS, INCLUDING PROJECT SPECIFIC SUPPLEMENTAL SPECIFICATIONS, AND MODIFICATIONS, IF ANY, AS DESCRIBED IN THE VARIOUS CONSTRUCTION ORDERS. THESE DRAWING FULLY SHOW ALL FINAL LOCATIONS, DIMENSIONS, CHARACTER, DETAILS, AND QUANTITIES OF WORK AS ACTUALLY CONSTRUCTED.

Paul J. Scagnelli — SCHIAVONE CONSTRUCTION CO.
Chief Engineer — TITLE
9/30/98 — DATE

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THE DESIGN MEETS APPLICABLE NJDOT STANDARDS AND PROJECT SPECIFIC SUPPLEMENTAL SPECIFCATIONS, AND MODIFICATIONS, IF ANY, AS DESCRIBED IN THE VARIOUS CONSTRUCTION ORDERS. THE AS-BUILT DRAWINGS ARE BASED UPON ACTUAL FIELD SURVEYS PERFORMED BY SCHIAVONE CONSTRUCTION CO. AND DRAFTED BY GOODKIND & O'DEA, INC.

GOODKIND & O'DEA, INC. — TITLE
Asst Branch Manager — 9/24/98 DATE

PREPARED BY GOODKIND & O'DEA, INC.

LOUIS K. ROBBINS, P.E.
P.E.N.J. LIC. NO. 36400
10/5/97 DATE

SUBMITTED BY SCHIAVONE CONSTRUCTION CO.

PAUL J. SCAGNELLI
10/6/97 DATE

TOTAL LENGTH OF THE PROJECT = 1,350 LIN. FT. OR .256 MILES

TOTAL LENGTH OF FEDERAL PROJECT NO. HDP-9246(005) = 1,350 LIN. FT. OR .256 MILES

1989 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION TO GOVERN

Submitted by — Director Project Management — 3/12/98 Date

Approved by — Assistant Commissioner, Capital Program Management — 3/12/98 Date

1/97

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	8	

30' 15 0 30' 60'
SCALE IN FEET

N.J. PLANE COORDINATE SYSTEM

D-1 PARCEL 212 | D-2 PARCEL 213 | D-3 PARCEL 214 | D-4 PARCEL 215 | D-5 PARCEL 217

TOPSOIL FERTILIZING AND SEEDING
E 578550 N 697950
CONSTRUCT TYPE 'B' PAVEMENT
CONSTRUCT CHAIN LINK FENCE, 4' HIGH - W/GATE
CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB
CONSTRUCT WHITE CONCRETE SIDEWALK, 8' WIDE
10' CURB TRANSITION
PROPOSED R.O.W. LINE
SEE NOTE 1
10' CURB TRANSITION
PROPOSED R.O.W. LINE
CONCRETE SIDEWALK, 10' WIDE
RELOCATE HYDRANT
MEET EXISTING PAVEMENT, CURB AND SIDEWALK (SUSSEX AVE. ℄ STA. 19+40)
10' CURB TRANSITION
CONCRETE SIDEWALK
CONSTRUCT TYPE 'B' PAVEMENT
CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB
CONSTRUCT 9" x 18" CONCRETE VERTICAL CURB AND CONCRETE SIDEWALK
CONSTRUCT CONCRETE SIDEWALK - VARIES
4 Sty. Brick Building
PROPOSED R.O.W. LINE
Existing Line
RELOCATE HYDRANT
FIRST ST. ℄ & PGL
Asphalt Overlay
POLES BY PSE&G
EXISTING ℄ S27° 51'34.7"W 30' x 42' Brick
S25° 57'01. 7"W
Asphalt Overlay
S27° 51'34. 7"W
POLE BY PSE&G
FIRST STREET
AVENUE
SUSSEX
MATCH LINE FIRST STREET ℄ STA. 13+00 SHEET C-2
MATCH LINE SUSSEX AVE. CONNECTOR ℄ STA. 34+20 SHEET C-2
E 578850 N 698250
AP FIRST ST. ℄ STA. 16+98.28 MEET EXISTING PAVEMENT CURB, AND SIDEWALK
10' CURB TRANSITION
B.M. T-2
AP FIRST ST. ℄ STA. 15+48.19
POLE BY PSE&G
CONSTRUCT CONCRETE SIDEWALK 5'-WIDE
MILLING AND RESURFACING
TOPSOIL, FERTILIZING AND SEEDING
POLE BY PSE&G
CONSTRUCT CONCRETE SIDEWALK 5'-WIDE
MEET EXISTING SIDEWALK
10' CURB TRANSITION
5 Sty. Brick Factory
CONCRETE SIDEWALK
CONSTRUCT TOPSOIL FERTILIZING AND SEEDING
CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB
NO ACCESS
CONSTRUCT TYPE 'B' PAVEMENT
2½ Sty. Brick Building
CONSTRUCT SCORED CONC. SIDEWALK - 10' WIDE
FIRST STREET ℄ STA. 14+28.19- SUSSEX AVE. ℄ STA. 20+00.00
NO ACCESS
INFILTRATION AREA
CONSTRUCT CHAIN LINK FENCE, PVC COATED STEEL, 8' HIGH, SEE NOTE 2
CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB
CONSTRUCT SCORED CONC. SIDEWALK 10'-WIDE
SUSSEX AVE. CONN. ℄ STA. 34+78, 60' RT.
10' WIDE GATE
SUSSEX AVE. CONN. ℄ STA. 34+78, 35' RT.
SUSSEX AVE. CONECTOR ℄ & PGL
LIMIT OF WORK FIRST STREET ℄ STA. 16+98.28
MEET EXISTING CURB (SUSSEX AVE. ℄ STA. 20+60, 40' RT.)
MILL 2" AND RESURFACE WITH BITUMINOUS CONCRETE SURFACE COURSE, MIX I-4 AGGREGATE MODIFIED
CONSTRUCT CONCRETE SIDEWALK, 5'-WIDE
SUSSEX AVE. ℄ & PGL
SUSSEX AVE. ℄ STA. 22+05.05-
SUSSEX AVE. CONNECTOR ℄ STA. - 35+47.74
CONCRETE SIDEWALK
INSTALL 8" CURB HEAD PIECE
MEET EXISTING PAVEMENT, CURB AND SIDEWALK SUSSEX AVE. ℄ STA. 22+60
10' CURB TRANSITION
CONSTRUCT CONCRETE SIDEWALK, 5'-WIDE
Paved Parking
Gate
Debris
E 578850 N 697800
CONSTRUCT TYPE 'C' PAVEMENT
NO ACCESS
SUSSEX AVE. CONNECTOR
S27° 51'34. 7"W
CONSTRUCT BEAM GUIDE RAIL WITH BEAM GUIDE RAIL ANCHORAGE
NON VEGETATIVE SURFACE BITUMINOUS CONCRETE
CONSTRUCT CHAIN LINK FENCE, PVC-COATED STEEL, 6' HIGH
CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB
MEET EXIST. CHAIN LINK FENCE
END FEDERAL PROJECT NO. HDP-9246(005) SUSSEX AVE. CONN. ℄ STA. 35+47.74

NOTES:
1. PARCEL 212 SHALL BE DEMOLISHED FIRST FOLLOWED BY PARCEL 213, 214 AND FINALLY PARCEL 215. ALL DEMOLITION SHALL BE PERFORMED FROM THE SIDES OF THE BUILDINGS. THE CONTRACTOR WILL AVOID THE BACK YARDS OF THE PROPERTIES IN ORDER TO PROTECT HISTORIC CULTURAL RESOURCES. REMAINING FOUNDATION WALLS WILL BE REMOVED TO THE EXISTING GROUND LINE AND THE BASEMENTS BACK FILLED.
2. EXISTING PAVEMENT INSIDE FENCE SHALL BE REMOVED.

B.M. T-2 ELEV. = 129.288, PK NAIL IN THE ASPHALT BERM ON THE EASTERLY SIDE OF FIRST STREET; 44' LEFT OF FIRST STREET BASELINE STATION 15+77.50.

C-1 / C-3

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN

ROUTE 280 SECTION 7AA

REVIEWED BY: Thomas J. Nicks
THOMAS J. NICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael DiPento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

SUBMITTED BY: Paul J. Scagnelli 10/9/97
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

GOODKIND & O'DEA, INC.
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: 1"=30'

8

REVISION	BY	REV'D	ACC'D	DATE
AS-BUILT	JJF			SEP 98

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.
In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

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08 OCT 97
10:10:50

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	9	

30' 15 0 30' 60'
SCALE IN FEET

MATCH LINE RELOC. RAMP-TE @ STA. 28+00 SHEET C-3

REMOVE EXISTING RAMP-TE BITUMINOUS PAVEMENT
CONSTRUCT TOPSOIL, SEEDING AND MULCHING.
REMOVE EXISTING FENCE
MEET EXISTING FENCE
CONSTRUCT CHAIN LINK FENCE, PVC COATED STEEL, 10' HIGH
REMOVE EXISTING RAMP-TE CONCRETE PAVEMENT
CONSTRUCT TOPSOIL, SEEDING AND MULCHING.
BEGIN WROUGHT IRON FENCE, 10' HIGH
RELOC. RAMP TE @ STA. 28+30.4, 117' RT.
ANGLE POINT WROUGHT IRON FENCE 10' HIGH
RELOC. RAMP-TE @ STA. 28+28.6, 110' RT.
CONSTRUCT MON. RELOCATED RAMP 'TE' @
STA. 29+00.00, 55' RT.
CONSTRUCT CONCRETE SIDEWALK, 6' WIDE
BEGIN CHAIN LINK FENCE, 10' HIGH
RELOC. RAMP TE @ STA. 29+35, 65' RT.
ANGLE POINT CHAIN LINK FENCE,
RELOC. RAMP TE @ STA. 29+35, 71' RT.
~~CONSTRUCT WROUGHT IRON FENCE, 4' HIGH~~
CONSTRUCT WROUGHT IRON FENCE, 10' HIGH
CONSTRUCT STEPS AND PARAPET WALL
SAWCUT AND REMOVE EXISTING ASPHALT 4' BEHIND PROP. WROUGHT IRON FENCE
CONSTRUCT TOPSOIL, SEEDING AND MULCHING
CONSTRUCT TYPE 'B' PAVEMENT
ANGLE POINT WROUGHT IRON FENCE @ STA. 12+10, 35' RT.
ANGLE POINT WROUGHT IRON FENCE, 10' HIGH @ STA. 12+10, 42.5' RT.
TEMPORARY CONST. EASEMENT
CONSTRUCT CONCRETE SIDEWALK - VARIES
PROPOSED R.O.W. LINE
6' WIDE GATE
TOPSOILING, FERTILIZING AND SEEDING
CONSTRUCT CONCRETE SIDEWALK, 4" THICK
4 Sty. Brick Building
Existing Line
SEE DETAIL "A" CONSTRUCTION DETAILS
FIRST STREET
RESET EXIST. RIM BY BELL ATL. CORP.
POLES BY PSE&G
PARCEL D-5 217 2½ Sty. Brick Building
RESET EXIST. RIM BY PSE&G
SEE NOTE 2
CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB
RELOCATE HYDRANT
PARCEL D-6 217
CONSTRUCT SCORED CONC. SIDEWALK - 10' WIDE
CONSTRUCT MON. SUSSEX AVE. CONN. @ STA. 30+81.35, 25' RT.
N/A SW. Brick Building
PARCEL D-8 218
PARCEL D-7 217
CONSTRUCT CHAIN LINK FENCE, PVC-COATED STEEL, 8' HIGH
SEE NOTE 1
STA. 33+00 30' RT
INFILTRATION AREA
NO ACCESS
MATCH LINE SUSSEX AVE. CONNECTOR @ STA. 34+20 SHEET C-1
SUSSEX AVE. CONNECTOR @ & PGL
TEMPORARY CHAIN LINK FENCE, 6' HIGH SEE NOTE 3
PC STA. 30+81.35
CONSTRUCT TYPE 'C' PAVEMENT
PROP. CONSTRUCTION AND MAINTENANCE
PROPOSED R.O.W. LINE NO ACCESS
MORRIS CANAL RUINS
CONSTRUCT MON. SUSSEX AVE. CONN. @ STA. 32+97.96, 25' RT.
PT STA. 32+97.96
CONSTRUCT 9"x16" WHITE CONCRETE VERTICAL CURB
NON VEGETATIVE SURFACE BITUMINOUS CONCRETE
CONSTRUCT CHAIN LINK FENCE, PVC-COATED STEEL, 6' HIGH
CONSTRUCT CHAIN LINK FENCE PVC-COATED STEEL 5' HIGH ON TOP OF CONC. BARRIER CURB
END RETAINING WALL NO. 1 SUSSEX AVE. CONNECTOR B STA. 33+70, 16.75' LT.
CONSTRUCT BEAM GUIDERAIL AND RUB RAIL
BEAM GUIDERAIL ATACHMENT ~~TYPE B~~ (SEE BRIDGE PLANS)
E 579150 N 698100

RELOCATED RAMP-TE @ & PGL
RAMP TWF @ & PGL
RAMP-TWF
N58°19'00"W
S49°42'34.1"E 55'-2'407.8"E
POT STA. 651+55.77
BITUMINOUS PAVEMENT
Asphalt Overlay Steel Pavement
Vault
Paved Parking
Asphalt Parking Lot
Existing R.O.W. Line
Conc. Sdwk.
Asphalt
Steel
Dirt Piles
Brush
Concrete
Asphalt Overlay
Asphalt Overlay Concrete Pavement
Asphalt Overlay Asphalt Pavement

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	10	

NOTE:
SEE BRIDGE PLANS, SHEET B-7,
FOR ADDITIONAL GUIDE RAIL
AT OVER HEAD SIGN STRUCTURE

POC
STA. 645+00.00

RELOC. RAMP-TE B STA 28+00.00+
EXIST. RTE. 75 STA. LINE
STA. 645+96.80, 24' RT.

MEET EXISTING PAVEMENT,
CURB AND CONCR. BARRIER

10' CURB
TRANSITION

CONSTRUCT 9"x16" WHITE
CONCRETE VERTICAL CURB

CONSTRUCT 4" WHITE
CONCRETE ISLAND

PCC
STA. 23+74.21

CONSTRUCT 15" X 41"
WHITE CONCRETE
BARRIER CURB

PCC
STA. 647+86.75

CONSTRUCT WHITE CONCRETE
ISLAND, 4" THICK

PT
STA. 25+28.65

CONSTRUCT MONUMENT
RELOCATED RAMP TE B
STA. 25+28.65, 40' RT.

PCC
STA. 648+35.75

REMOVE EXISTING
CONCRETE PAVEMENT

BEAM GUIDE RAIL ATTACHMENT
TYPE A SEE CD-53

CONSTRUCT 6" CONC. MEDIAN
END WALL STA. 26+20.00

END 15"x41" W.C. BARRIER CURB
BEGIN 9"x16" W.C. VERTICAL CURB

PT
STA. 649+35.75

BEAM GUIDE RAIL
ANCHORAGE RAMP-TWF
@ STA. 53+25, ~~33~~ 33' RT.

REMOVE EXISTING RAMP-TE PAVEMENT
CONSTRUCT TOPSOIL, SEEDING AND MULCHING.

EXIST. CHAIN LINK FENCE TO REMAIN

MEET EXIST. CHAIN LINK FENCE

MEET EXIST. SIDEWALK

REMOVE EXISTING
ASPHALT PAVEMENT

CONCRETE SIDEWALK

CONSTRUCT TYPE 'A'
PAVEMENT

CONSTRUCT CHAIN LINK FENCE, PVC-COATED STEEL, 10' HIGH

REMOVE EXISTING FENCE

CONSTRUCT CONCRETE SIDEWALK, 8' WIDE

CONSTRUCT WHITE
CONCRETE ISLAND, 4" THICK

EXISTING FENCE TO REMAIN

REMOVE EXISTING SIDEWALK
CONSTRUCT TOPSOIL, SEEDING
AND MULCHING

MEET EXISTING PAVEMENT, CURB AND CONC. BARRIER

10' CURB TRANSITION

RTE. 75 STATION LINE STA 645+00.00+
RAMP TWF ℄ STA. 57+87.92, 12' LT.

BEGIN PROJECT AND
FEDERAL PROJECT
NO. HDP-9246(005)
℄ STA. 645+00.00
RAMP-TWF STA. 57+87.92

N.J. PLANE COORDINATE SYSTEM

ROUTE 280 EB

Existing Rte. 75 Station Line

Asphalt Shoulder | Concrete Pavement | Asphalt Shoulder | Asphalt Overlay | Asphalt Shoulder | Concrete Pavement

TG 129.03
Inv. 122.79 (15" In)
Inv. 122.76 (15" Out)

TG 129.06
Inv. 122.73 (15" In)
Inv. 122.65 (15" Out)

RAMP TW ℄ STA 44+45.36+
RAMP TWF ℄ STA. 56+89.54, 36' RT.

Rim 130.83
Inv. 122.33 (15" In)
Inv. 125.83 (15" In)
Inv. 121.40 (24" Out)

E 578550
N 699000

15" RCP

TG 130.60
Inv. 127.20 (6" In)
Inv. 126.30 (15" Out)

TG 129.67
Inv. 124.67 (6" In)
Inv. 121.17 (15" Out)

TWF

TE-1

75-1

6" CMP

15" RCP

R-2176

'B'

Inv. 123.63

36' | 12'

Asphalt Overlay

Concrete Pavement

Asphalt Shoulder

Asphalt Shoulder

Asphalt Overlay

Asphalt Shoulder

24" RCP

R-2048

15" RCP

Inv. 127.58
Inv. 124.02
Inv. 124.06

6" Metal

Inv. 124.90

WHITE CONCRETE
ISLAND, 4" THICK

Rim 133.60
Inv. 128.60 (12" In)
Inv. 128.20 (15" In)
Inv. 127.70 (21" Out)

TE-2

RELOCATED RAMP TE B & PGL

24

R-2212

N56° 59' 56" W

30.35'

5.85'

24'

VAR.

23.56'

PC
STA. 55+47.39

75-2

PCC
STA. 647+86.75

Concrete

Abandoned Roadway

R-1650'

16.53'

24" RCP

R-4048

Rim
Inv. 128.4

BEAM GUIDE RAIL ATTACHMENT
TYPE A SEE CD-53

WHITE CONCRETE ISLAND, 4" THICK

PT
STA. 42+50.50

CONSTRUCT 12" x 13" WHITE
CONCRETE SLOPING CURB

CONSTRUCT 9" x 16" WHITE
CONCRETE VERTICAL CURB

Rim 132.50
Inv. 129.00

PCC
STA. 41+70.00

CONSTRUCT MON. RAMP TWF ℄
STA. 54+00.00, 40' RT.

BEGIN 15"x41" WHITE
CONC. BARRIER CURB

~~END~~ PROP. CHAIN LINK
FENCE, 4' HIGH
RAMP TW ℄ STA. 41+00, 28' LT.

REMOVE EXISTING
BEAM GUIDE RAIL

NON VEGETATIVE SURFACE
BITUMINOUS CONCRETE

CONSTRUCT TYPE A
PAVEMENT

37.5' PARABOLIC FLARE

POC
STA. 40+00.00
10' CURB
TRANSITION

12" RCP

MEET EXISTING PAVEMENT
& CURB STA. 40+00.00

SAWCUT

10' CURB
TRANSITION

MILLINGS

REMOVE EXISTING
ASPHALT PAVEMENT

NON VEGETATIVE SURFACE
BITUMINOUS CONCRETE

CONSTRUCT TOPSOIL,
SEEDING AND MULCHING

CONSTRUCT CHAIN LINK FENCE,
PVC-COATED STEEL 4' HIGH

REMOVE EXISTING CONCRETE PAVEMENT

TOP OF
SLOPE

CONSTRUCT TYPE A
PAVEMENT

CONSTRUCT SRT RAMP-TWF ℄
STA. 41+94.9' LT.

CONSTRUCT BEAM GUIDE RAIL
~~AND RUB RAIL~~

CONSTRUCT 9" x 16" WHITE
CONCRETE VERTICAL CURB

RAMP-TWF ℄ & PGL
RAMP<TWF

N53° 19' 00" W
83.46'

R-150'

R-90'

R-1'

R-325'

R-150'

RAMP TW ℄ & PGL
RAMP-TW

TG 135.71
Inv. 132.21

TG 130.05
Inv. 123.21

TG 136.16
Inv. 131.80 (12" In)
Inv. 131.26 (15" In)
Inv. 130.54 (12" Out)

GATE
10' WIDE

MILLINGS

REMOVE EXISTING
ASPHALT PAVEMENT

NON VEGETATIVE SURFACE
BITUMINOUS CONCRETE

CONSTRUCT TOPSOIL,
SEEDING AND MULCHING

CONSTRUCT CHAIN LINK FENCE,
PVC-COATED STEEL 4' HIGH

REMOVE EXISTING CONCRETE PAVEMENT

CONSTRUCT TYPE A
PAVEMENT

CONSTRUCT SRT RAMP-TWF ℄
STA. 41+94.9' LT.

CONSTRUCT BEAM GUIDE RAIL
~~AND RUB RAIL~~

CONSTRUCT 9" x 16" WHITE
CONCRETE VERTICAL CURB

REMOVE EXISTING ASPHALT
PAVEMENT AND CURBING
CONSTRUCT TOPSOIL, SEEDING
AND MULCHING-SEE NOTES 1 & 2

CONVERT INLET, TYPE 'B'
TO INLET, TYPE 'E'
T.G.=131.00

B.M.
T-7

CONSTRUCT CONCRETE
SIDEWALK, 8' WIDE

Rim 130.15
Inv. 127.28

Inv. 126.05

15" RCP

CONSTRUCT 9" x 16"
CONCRETE VERTICAL CURB

CONSTRUCT 2-PINUS STROBUS, BB.
5'-6" HIGH

Inv. 126.45

REMOVE EXISTING
GUIDERAIL

CHAIN LINK FENCE
PVC COATED STEEL, 4' HIGH

CONSTRUCT SRT
IN THE VICINITY
OF THE EXIST.
BEAM GUIDERAIL
END TREATMENT

ORANGE STREET

Stone Bridge

Concrete Sidewalk

TG 128.15
Inv. 119.50

TG 127.66
Inv.

Inv. 119.50

NOTES:
1. AREA UNDER VIADUCT TO BE COVERED WITH NON-VEGETATIVE SURFACE TO THE OUTSIDE DRIP LINE.
2. NON-VEGETATIVE SURFACE CAN BE EITHER MILLINGS OR BROKEN STONE, 4" THICK.

B.M. T-7 ELEV. = 130.909, PK NAIL IN THE CONCRETE SIDEWALK EXPANSION JOINT ON THE NORTHEASTERLY CORNER OF ORANGE STREET AND THIRD STREET; 286' RIGHT OF THE RAMP 'TWF' BASELINE STATION 55+52.00.

30' 15' 0 30' 60'
SCALE IN FEET

C-3 / C-3

MATCH LINE RELOC. RAMP-TE ℄
STA. 28+00 SHEET C-2

E 578400
N 698500

E 578550
N 698400

Abandoned Roadway

Brush

N58° 24' 01" E

RELOCATED RAMP TE B

649+42.34, P.E.

27'

100.0'

Asphalt Pavement

Concrete Pavement

Abandoned Roadway

Asphalt Shoulder

Asphalt Shoulder

Asphalt Shoulder

Asphalt Pavement

Asphalt Pavement

Asphalt Pavement

Concrete Pavement

Abandoned Roadway

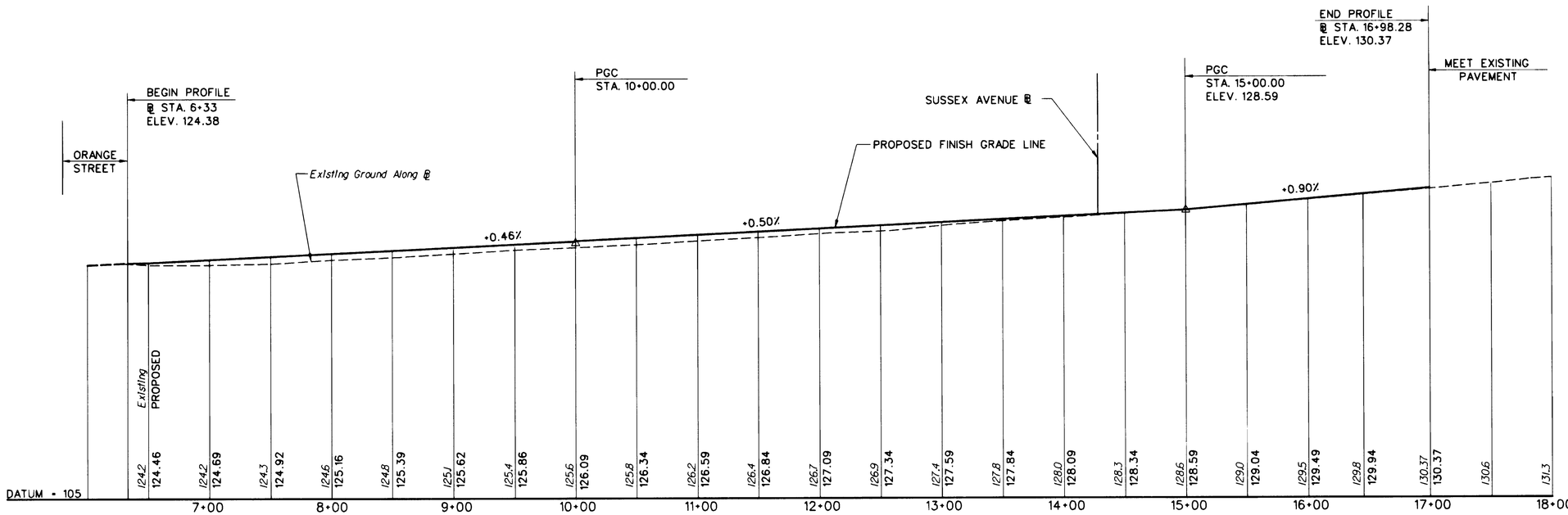
Asphalt Pavement

Asphalt Pavement

Asphalt Pavement

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	14	

HOR. 50' 25' 0 50' 100'
VERT. 5 2.5 0 5' 10'
SCALE IN FEET



FIRST STREET
V=30 M.P.H.

PGC - POINT OF GRADE CHANGE

P-1 / P-3

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PROFILES

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis Robbins 1/29/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: AS SHOWN

14

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC NO. 38782

ACCEPTED BY: Michael D. Dipento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

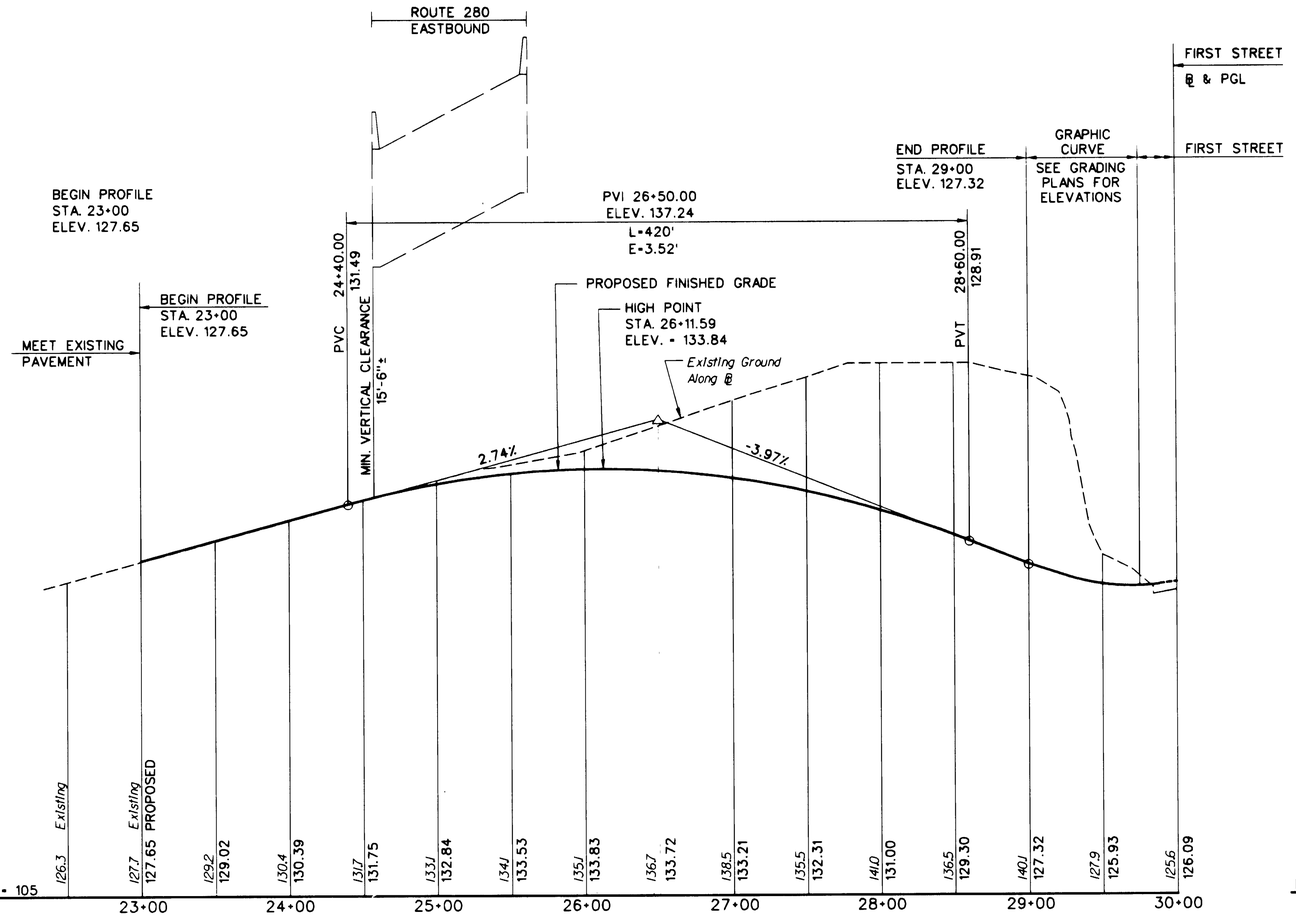
REVISION	BY	REV'D	ACC'D	DATE
FIRST ST.	LOU			DEC.'97

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

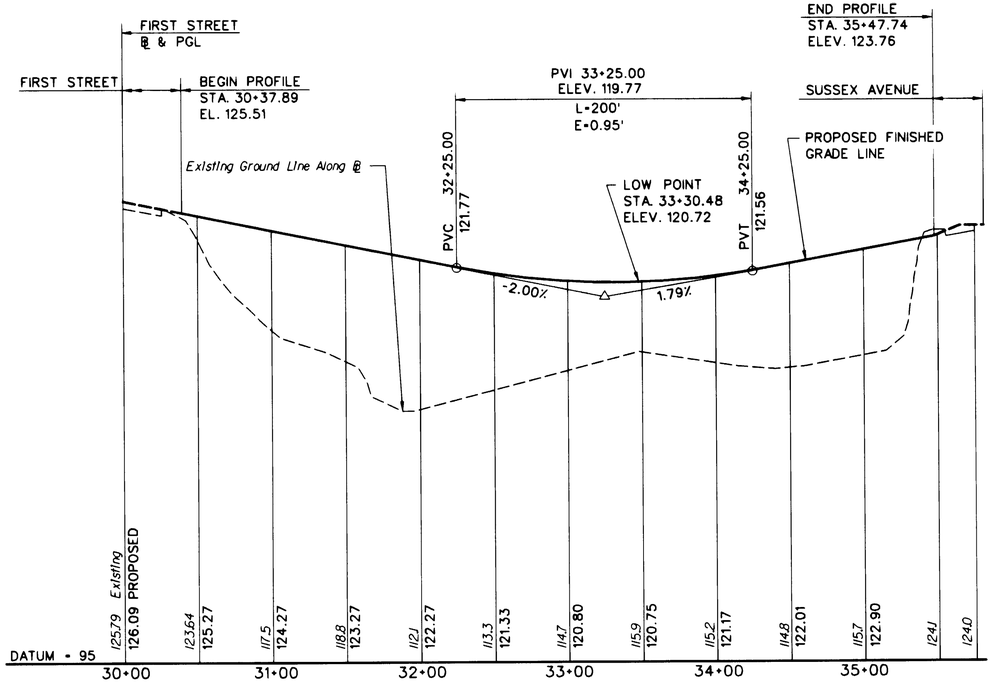
STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	15	

HOR. 50' 25' 0 50' 100'
VERT. 5 2.5' 0 5' 10'
SCALE IN FEET



RELOCATED RAMP-TE

V=40 M.P.H.



SUSSEX AVE. CONNECTOR

V=30 M.P.H.

E- DIFFERENCE BETWEEN P.V.I. ELEVATION AND VERTICAL CURVE ELEVATION AT THE P.V.I. STATION.

P-2

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PROFILES

ROUTE 280 SECTION 7AA

GOODKIND & O'DEA, INC.
Louis Robbins 1/22/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: AS SHOWN

15

SUBMITTED BY: Paul J. Scagnelli 1/20/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Dipento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
FIRST ST.	LOU			DEC.'97

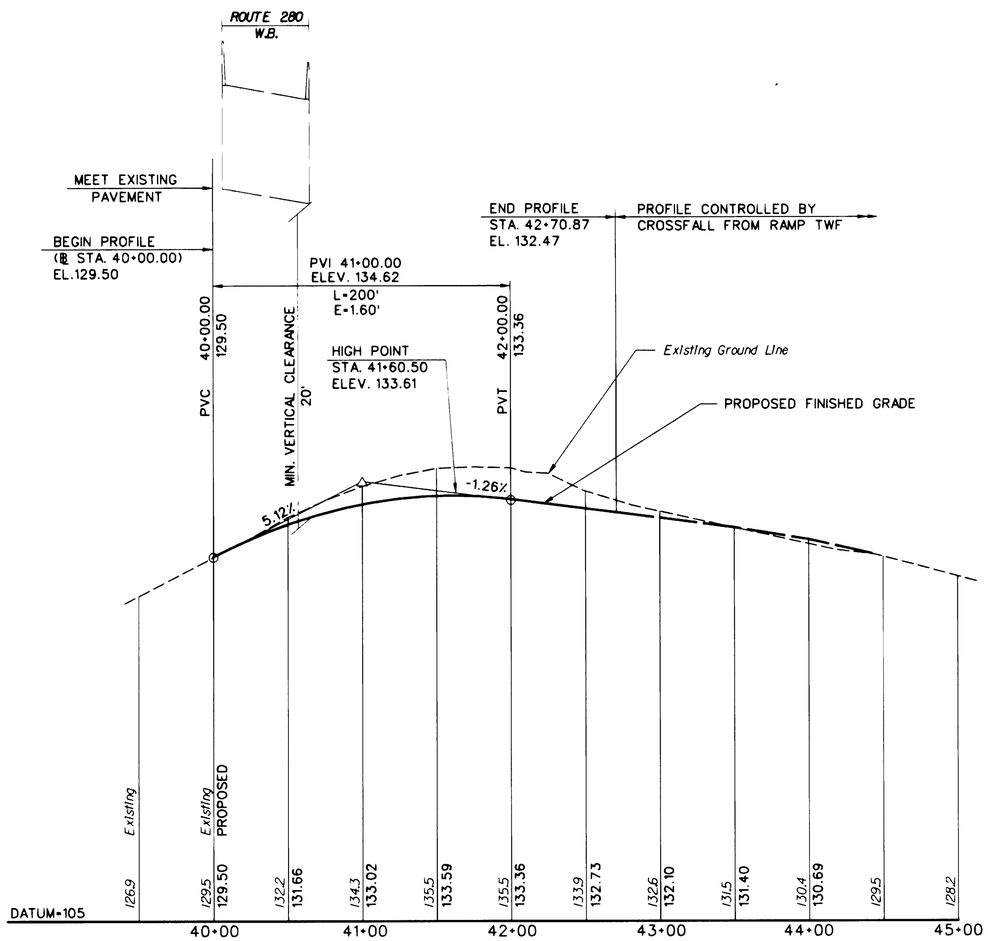
Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

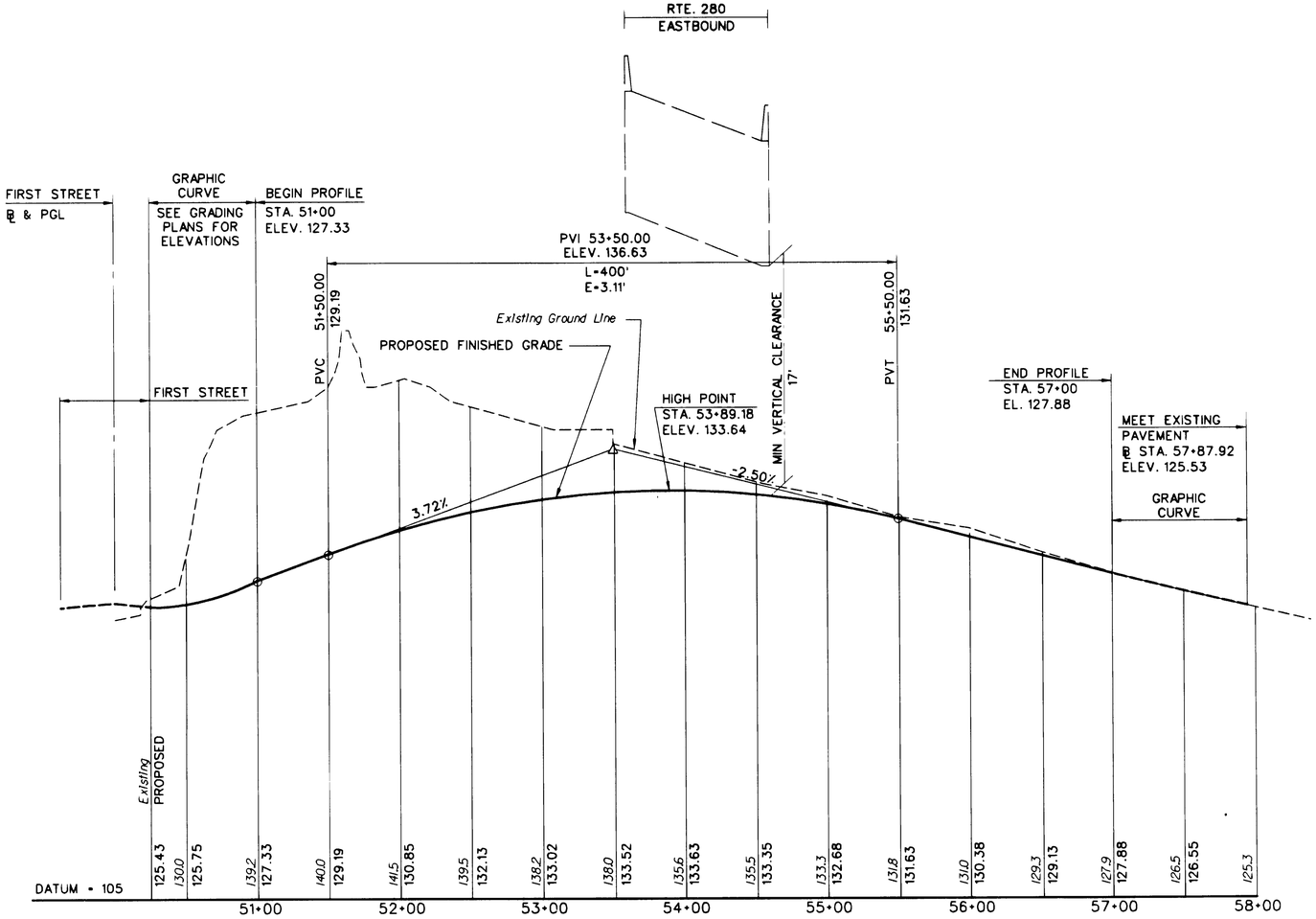
PRINTED DATE: 1/22/98

STATE	FEDERAL PROJECT NO	SHEET	TOTAL SHEETS
N.J.	HDP-9246(005)	16	

HOR. 50' 25' 0 50' 100'
VERT. 5 2.5' 0 5 10'
SCALE IN FEET



RAMP-TW
V=25 M.P.H.



RAMP-TWF
V=40 M.P.H.

P-3
P-3

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PROFILES

ROUTE 280 SECTION 7AA

REVIEWED BY: Thomas J. Hicks
THOMAS J. HICKS, P.E.
P.E. N.J. LIC. NO. 38782

ACCEPTED BY: Michael D. Lento
MICHAEL DIPENTO
PROJECT ADMINISTRATOR NJDOT

REVISION	BY	REV'D	ACC'D	DATE
FIRST ST.	LOU			DEC.' 97

SUBMITTED BY: Paul J. Scagnelli 1/30/98
PAUL SCAGNELLI, P.E.
CHIEF ENGINEER
SCHIAVONE CONSTRUCTION CO.

GOODKIND & O'DEA, INC.
Louis K. Robbins 1/29/98
LOUIS K. ROBBINS, P.E.
P.E. N.J. LIC. NO. 36400

SCALE: AS SHOWN

16

Goodkind & O'Dea, Inc.
Consulting Engineers and Planners
Rutherford, N.J.

In Charge of
Designed by
Design Checked by
Detailed by
Detail Checked by

FILES
DATES
STAGES

Fed. Road Div. No.	State	Federal Project No.	Sheet	Total Sheets
1	N.J.	N. J. - I - 280 - 6 (36) 60	1	132

133

C.S.# 0730 & C.S.# 0731

SHEET NO.	INDEX OF SHEETS
1	KEY SHEET
2 - 3	ESTIMATE OF QUANTITIES
4 - 7	DISTRIBUTION OF QUANTITIES
8 - 9	TYPICAL SECTIONS
10 - 11	ALIGNMENT
12 - 13	DEMOLITION PLANS
14 - 17	PLAN SHEETS
18 - 20	DRAINAGE & UTILITY RELOCATION PLANS
21 - 23	GRADING, SIGNING & LANDSCAPING PLANS
24 - 28	ELECTRICAL PLANS
29 - 35	PROFILES
36 - 70	CONSTRUCTION DETAILS
71	EARTHWORK SUMMARY
72 - 87	CROSS SECTIONS
88 - 132	BRIDGE, WALL & SIGN STRUCTURE PLANS
133	PIER #8 E.B. REVISION (SUPPLEMENTAL)

UTILITY COMPANIES		
PUBLIC SERVICE ELECTRIC & GAS COMPANY	—	GAS & ELECTRIC
NEW JERSEY BELL TELEPHONE COMPANY	—	TELEPHONE
CITY OF NEWARK		
DIRECTOR OF PUBLIC WORKS	—	WATER & SEWERS
POLICE SIGNAL SUPT.	—	POLICE SIGNAL SYSTEM
FIRE ALARM SUPT.	—	FIRE ALARM SYSTEM
ERIE - LACKAWANNA R.R. CO.		RAILROAD
PUBLIC SERVICE COORDINATED TRANSPORT OF NEW JERSEY	—	CITY RAILWAY

State of New Jersey
Department of Transportation

PLANS OF

ROUTE 280 SECTION 7 D

From Sixth Street to the
Newark City Railway

GRADING, DRAINAGE, PAVING,
VIADUCT CONSTRUCTION AND WALLS

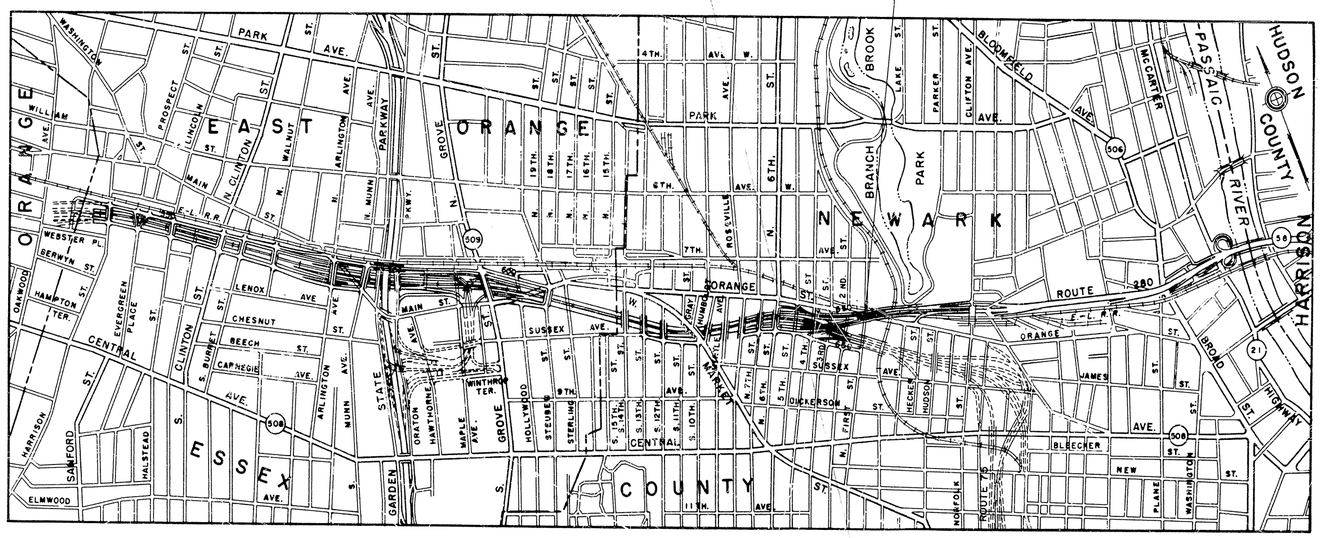
City of Newark — Essex County
Scales as Indicated — February 1968

AS BUILT

BEGIN PROJECT
BASELINE ROUTE 280 E.B. STA. 640 + 19.00

℄ OF FIRST ST.
C.S.# 0730 C.S.# 0731

END FEDERAL PROJECT NO. N.J.-I-280-6(36)60
BASELINE ROUTE 280 E.B. 656 + 55.96



END PROJECT
BASELINE ROUTE 280 E.B. STA. 657 +00.00

RESIDENT ENGINEER: WOLFRIED BLUMFELD
CONTRACTOR: SCHIAVONE CONSTRUCTION CO, INC.

DATE CONSTRUCTION STARTED: 07-17-67
DATE CONSTRUCTION COMPLETED: 03-14-68

AS BUILTS PREPARED BY NEWARK SURFACE DESIGN
DATE: 6-3-72
REFERENCES: BOOKS [illegible]

DESIGN DATA

ADT 1965	=	22,300
ADT 1975	=	49,700
DHV 1975	=	4,750
D	=	55%
T	=	4%
V	=	50M.P.H.

KEY MAP

SCALE: 1" = 1,000'

BEGIN FEDERAL PROJECT NO. N.J.-I-280-6(36)60
BASELINE ROUTE 280 E.B. STA. 643 + 16.00

STANDARD HIGHWAY SPECIFICATIONS OF 1961 TO GOVERN

LENGTH OF PROJECT = 1681.00 LIN. FT. = 0.318 MILE
LENGTH OF FEDERAL PROJECT NO. N.J.-I-280-6(36)60 = 1339.96 LIN. FT. = 0.254 MILE

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS
APPROVED
Division Engineer — Date

Submitted by _____ Director of Design, Transportation — Date
Approved by J.R. Schuyler State Highway Engineer — 3-11-68 Date
Approved by _____ Commissioner of Transportation — Date

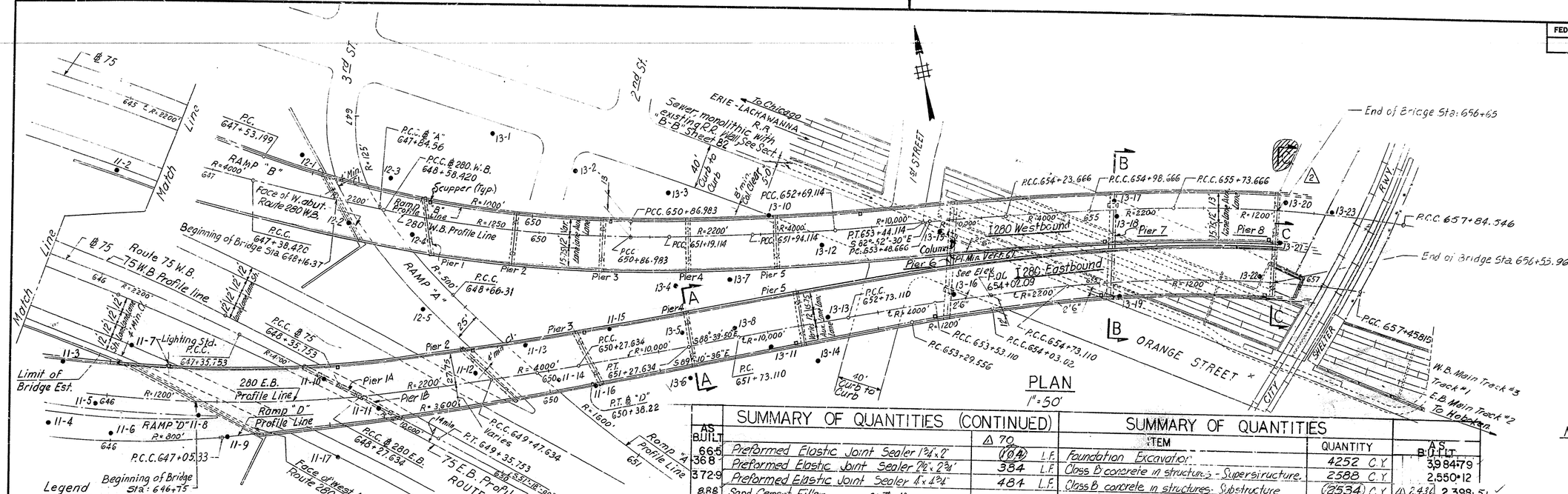
1/132

7D

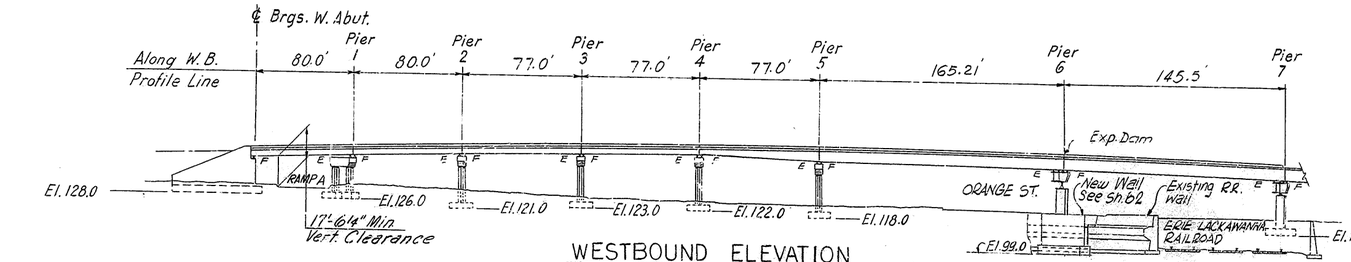
0731 001 133

0730276-7

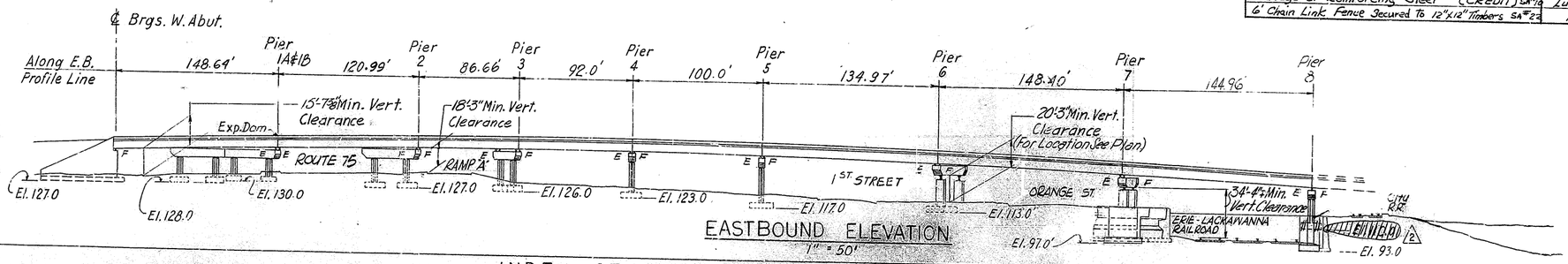
FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-1-280-6(36)60	N.J.	1967	88	~~132~~ 133



PLAN
1" = 50'



WESTBOUND ELEVATION
1" = 50'



EASTBOUND ELEVATION
1" = 50'

SUMMARY OF QUANTITIES (CONTINUED)

AS BUILT		Δ 70		
665	Preformed Elastic Joint Sealer 1¾"x 2"	(104)	L.F.	
368	Preformed Elastic Joint Sealer 2½", 2¾"	384	L.F.	
372.9	Preformed Elastic Joint Sealer 4"x 4¾"	484	L.F.	
8.88	Sand Cement Filler SA # 10	8.88	C.Y.	
183.25	Removal of Concrete Slab SA #	183.25	C.Y.	
100%	Alteration of Existing Masonry Wall (R.R. Wall North)	Lump Sum		
68	Removal of Concrete Masonry (R.R. Wall South)	52	C.Y.	

SUMMARY OF QUANTITIES

ITEM	QUANTITY	AS BUILT
Foundation Excavation	4252 C.Y.	3,984.79
Class B concrete in structures - Superstructure	2588 C.Y.	2,550.12
Class B concrete in structures - Substructure	(2534) C.Y.	Δ 2,436 2,398.51 ✓
Class C concrete in structures	1726 C.Y.	1,818.10
White Concrete barrier curb - Bridge	183.7 L.F.	1,889.55
Concrete Parapet (2'-3" High)	1793 L.F.	1,790.46
Reinforcement steel in Structures	1055,727 Lbs.	1,142,929
Structural Steel	4,319,219 Lbs.	4,337,132 ✓
Shear Connectors	37,543 Ea.	27,036 ✓
Epoxy Waterproofing	4192 S.F.	4,233.66
8"ϕ Corrugated Metal pipe	321 L.F.	327
½"ϕ Rigid Metallic Conduit	30 L.F.	30
2"ϕ Rigid Metallic Conduit	37 L.F.	33.5
3"ϕ Rigid Metallic Conduit	2077 L.F.	2,187.8
Junction Box 10"x 36" (Frame & Cover)	14 Ea.	14
2½"ϕ Rigid Metallic Conduit	234 L.F.	231.7
24" Split Galv. Cast Iron Sleeve SA #9	Lump Sum	100%
Permanent Sheeting	1900 S.F.	1,784.80
Temporary Sheeting	3854 S.F.	4,202.19
Lighting Standard Assembly Class L-8.5.B	1 Ea.	1
Cast Steel Scuppers Type A	9 Ea.	9
Cast Steel Scuppers Type B	3 Ea.	3
Wrought Iron Gutter	132 L.F.	138.3
6"ϕ Wrought Iron Pipe	642 L.F.	642.2
Salvage of Reinforcing Steel (CREDIT) SA #16	Lump Sum	100%
6' Chain Link Fence Secured To 12"x12" Timbers SA #23	120 L.F.	107.7

Note: For Sections A-A & B-B ~~C-C~~ See Sheet B2
For Section C-C See Sh. No B11.S. (2)

GENERAL NOTES

1. SPECIFICATIONS: New Jersey State Highway Department Standard Specifications 1961 together with supplementary Specifications prepared for this Contract
   All welding to Comply with American Welding Society "Standard Specifications for Welded Highway and Railway Bridges" 1966
2. DESIGN SPECIFICATIONS: A.A.S.H.O. 1961 Standard Specifications for Highway Bridges, Division I and as follows:
   a) LIVE LOAD: H-20-S16-44 or alternate loading of tandem 24,000 lbs. axles 4'-0" apart.
   b) DESIGN STRESSES:
      (1) Concrete in Structures
      Ultimate Compressive Strength 3000 psi.
      Extreme fibre in Compression Max. 1200 psi.
      Extreme fibre in Compression deck slab only 1000 psi.
      (2) Reinforcement Steel
      Intermediate Grade f_s 20000 psi.
      (3) Structural Steel
      A.S.T.M A36
      Live Load Deflection, Max. f_s 20000 psi. $\frac{1}{1200}$ Span Length
3. CONCRETE IN STRUCTURE:
   a) Class 'A' Concrete
      1) Concrete Parapets
   b) Class 'B' Concrete - Superstructure
      1) Bridge Decks
      2) Sidewalks, Safety Walks and Barrier Curbs on Bridge deck
   c) Class 'B' Concrete - Substructure
      1) Abutments, Walls and Piers above footings
      2) Sidewalks or Safety Walks on Walls
   b) Class 'C' Concrete
      Footings for Abutments, Walls and Piers

B1 8-45

INDEX OF DRAWINGS

SHEET NO.	TITLE
B 1	GENERAL PLAN AND ELEVATION
B 2	SECTIONS, DETAILS AND PROFILES
B 3	WEST ABUTMENT (E.B.) PART I
B 4	WEST ABUTMENT (E.B.) PART II
B 5	WEST ABUTMENT (W.B.) PART I
B 6	WEST ABUTMENT (W.B.) PART II
B 7	ABUTMENT DETAILS
B 8	PIER GEOMETRY, TYPICAL PLANS & ELEVATIONS
B 9	PIER DETAILS AND DIAPHRAGM SCHEDULE
B 10	PIER REINFORCEMENT DETAILS & SCHEDULE
B 11	PIERS NOS. 6 & 7 & B COLUMN AND WALL DETAILS
B 12	FRAMING PLAN PART I
B 13	FRAMING PLAN PART II
B 14	WELDED STRINGER SCHEDULE
B 15	STEEL SECTIONS AND DETAILS
B 16	STRINGER SHOES AND BOLSTERS
B 17	BOX GIRDER BEARINGS PIER 6 AND PIER 7
B 18	BOX GIRDER AT PIER 6
B 19	BOX GIRDER AT PIER 7
B 20	EXPANSION DAM & DETAILS
B 21	DRAINAGE DETAILS
B 22	DECK JOINT DETAILS
B 23	DECK REINF. PLAN AND SECTIONS
B 24	DECK SLAB REINFORCEMENT PLANS
B 25	DECK SLAB CORNER REINFORCEMENT PLANS
B 26	SAFETY WALK, PARAPET & BARRIER CURB REINFORCEMENT
B 27	DECK REINFORCEMENT BAR SCHEDULE PART I
B 28	DECK REINFORCEMENT BAR SCHEDULE PART II
B 29	PARAPET GEOMETRY & RAILING DETAILS
B 30	LIGHTING STANDARD & JUNCTION BOX DETAILS

NOTE:
1. For Index of Wall Drawings see Sheet No B31
2. For Sign Structures see Sheet No B42-B45 Inclusive
3. For Wall Quantities see Sheet No B42

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY T. T. Fuhrman

APPROVED
Jack Friedrich
CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

IN CHARGE OF J. Friedrich
CHECKED BY J. Friedrich

REVISION	BY.	CKD.	DATE
Sect. Elev. Revision	S.A.	J.K.	2-24-69
As noted Revision 2	J.R.M.	G.S.C.	7-15-68

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280 SECTION: 7D
MUNICIPALITY: NEWARK COUNTY: ESSEX

GENERAL PLAN AND ELEVATION

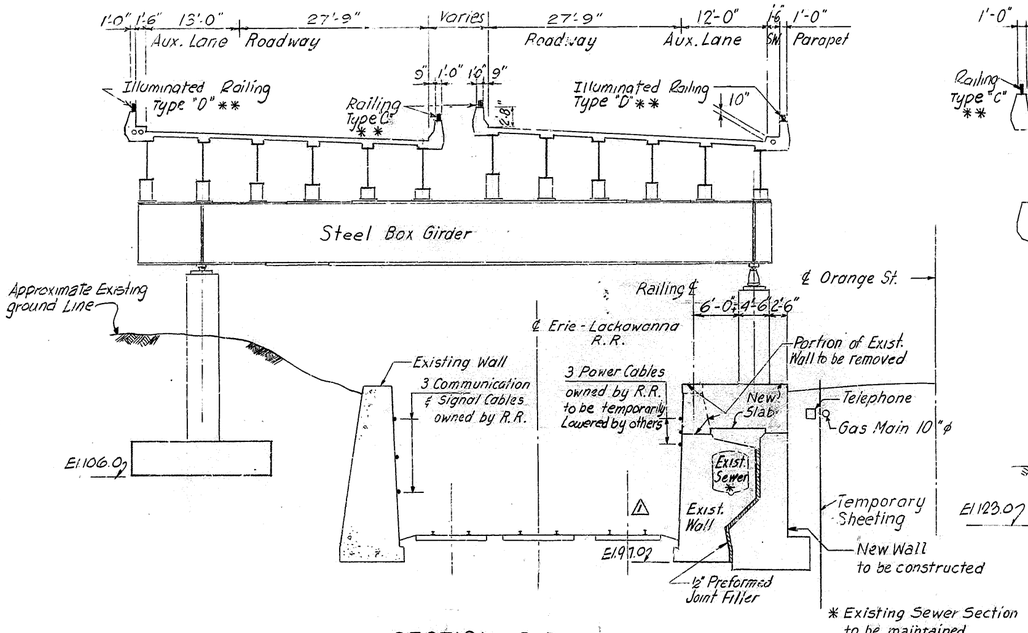
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
ENGINEERS
NEW YORK TRENTON

SCALE: As Noted
DATE: Jan. 1968
SHEET NO. 88 OF ~~132~~ 133

0730088 133 276

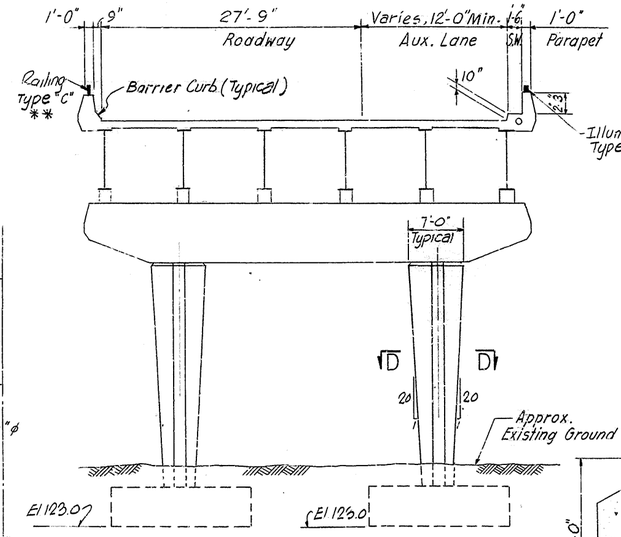
0730-276-7

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-I-280-6(36)60	N.J.	1967	89	~~132~~ 133

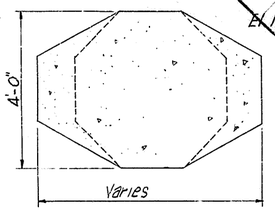


SECTION B-B
3/32" = 1'-0"

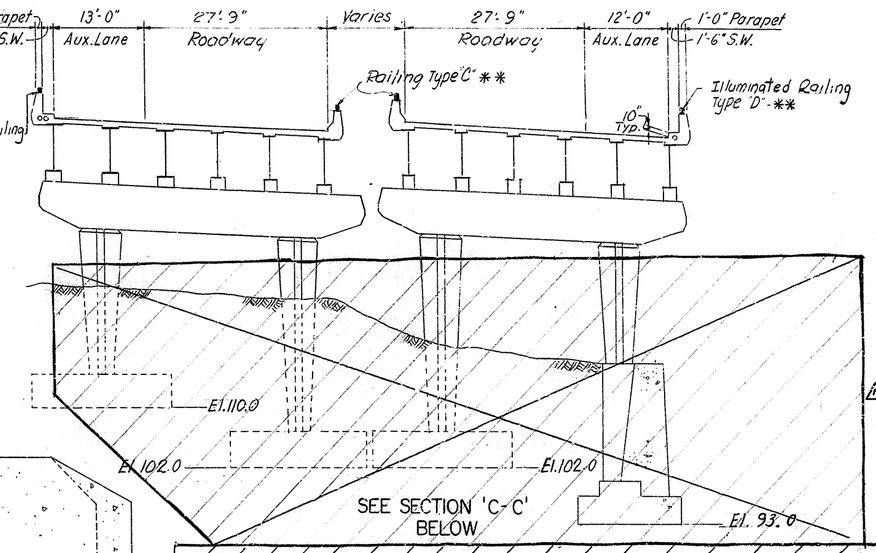
NOTE: For New Wall & Slab details see Sh. No: B11

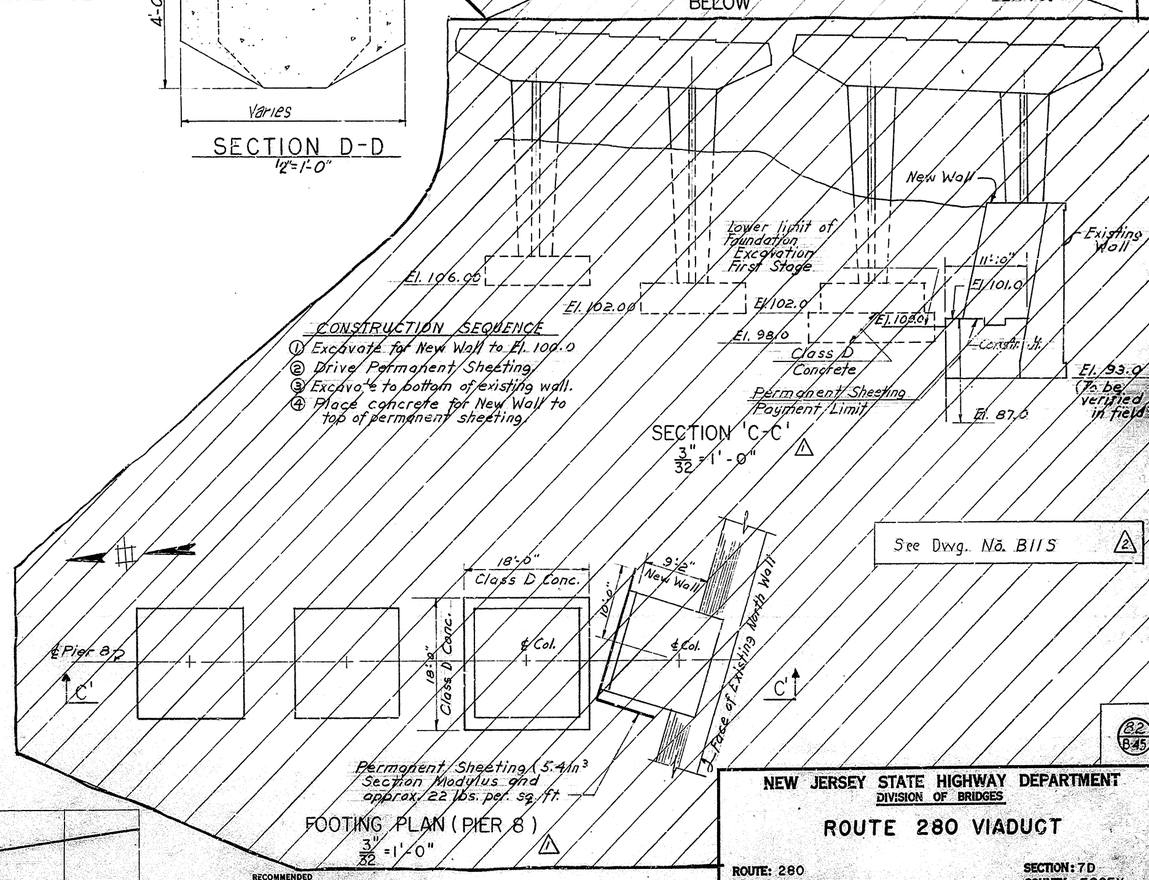


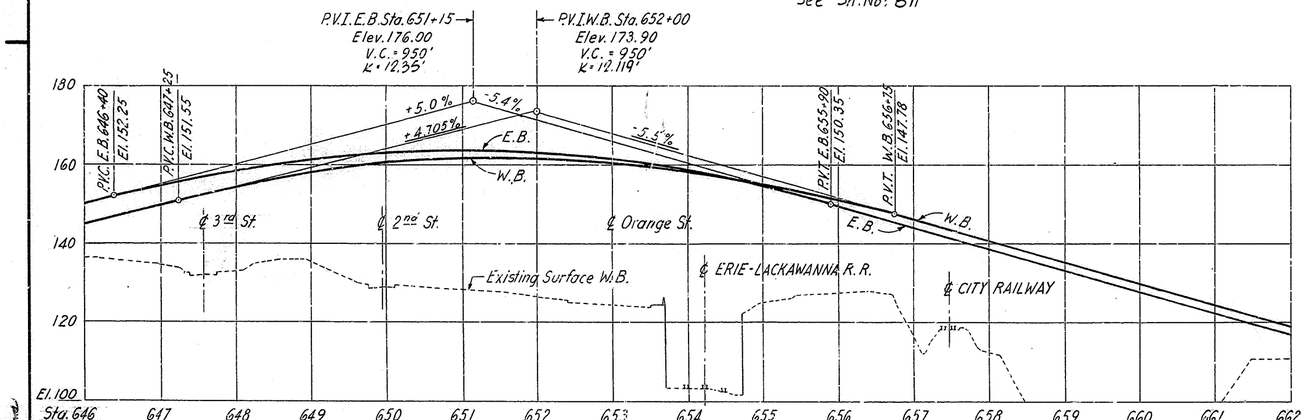
SECTION A-A
1/8" = 1'-0"



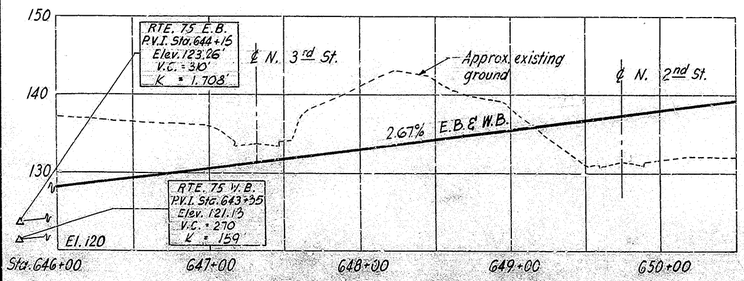
SECTION D-D
1/2" = 1'-0"



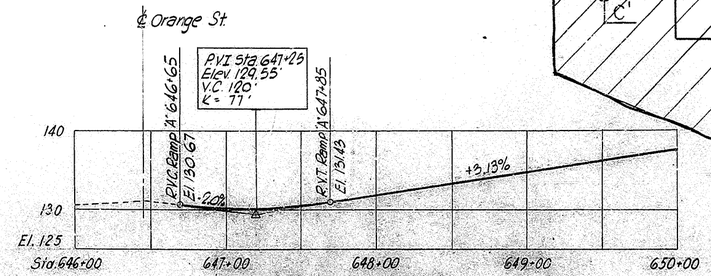




PROFILE OF ROUTE 280
Hor. 1" = 100'
Vert. 1" = 20'



PROFILE OF ROUTE 75
Hor. 1" = 50'
Vert. 1" = 10'



RAMP "A" - PROFILE
Hor. 1" = 50'
Vert. 1" = 10'

IN CHARGE OF: J. Kaufman
MADE BY: M. K. Kirman
CHECKED BY: J. Kaufman

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY: W. T. Lyckman

APPROVED
DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

REVISION	BY	CKD.	DATE
Delete Section C-C & Add Sect. CC & Rev. Plan	S.A.	J.K.	2-24-69
Add Sect. CC & Rev. Plan	F.L.	J.K. JRS	11-18-68

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280
MUNICIPALITY: NEWARK
SECTION: 7D
COUNTY: ESSEX

SECTIONS, DETAILS & PROFILES

PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
ENGINEERS
NEW YORK TRENTON

SCALE: As Noted
DATE: Jan. 1968
SHEET NO. 89 OF ~~132~~ 133

B2
B45

0730 089 133 277

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-I-280-6(36)60	N.J.	1967	90	132

Note x: See Detail for Guard Rail Connection to parapet on Sh. No. B6

For Continuation of Wingwall see Sh. No. B4

Step in Ftg.

℄ Expansion Jt.

Profile Line Route 280 East Bound

℄ Brg's (Fixed) S51°30'00.00"E

℄ Contr. Jt.

℄ Stringer (Typ)

Face of Backwall

Face of Abutment

Gutter Line

See Note x

1-3" ϕ R.M. Conduit (Stub out 5'0" & 2'0" below finished grade thread & cap end

8" ϕ Perf. C.M. Pipe (Slope 1/8"/1' min.)

For Alignment Shoe Recess Details see Sh. No. B7

Sta. 646+79.34

R=1200

R=1170.5

R=3948'

W.P.1

W.P.2

Fascia Str.

Bottom of Batter

Front Face of Wall

Stub out 5'0", Thread & Cap End

℄ Exp. Jt.

Wall "C" (See Sh. No. B34)

E.B.M. P.C. Sta. 646+50.40

Contr. Jt.

3" (Typ.)

SECTION F-F

3/16" = 1'-0"

* Angles shown to be used for setting anchor bolts only.

*** Notch footing to clear Drop Inlet (Type "B") as shown

Top of Backwall to follow top of Roadway Grade

Top of Barrier

Top of Wall

Finished Grade

Approx. Existing Ground

Inv. El. 133.0

Contr. Jt.

Contr. Jt. in Footing

℄ Brg's

Top of Backwall

Top of Barrier (for Details see Sec. C-C)

Constr. Jt. (Optional)

Top of Footing

Finish

Class "B" White Concrete Barrier Curb

Top of Roadway Pavement

Typical Step Footing Reinforcement

Inv. El. 125.0 at front face of footing

Face of Abutment

PANEL ①

SECTION A-A

3/8" = 1'-0"

SECTION B-B

3/8" = 1'-0"

ELEVATION

3/16" = 1'-0"

SECTION C-C

1/2" = 1'-0"

SECTION D-D

3/16" = 1'-0"

SECTION E-E

1/2" = 1'-0"

SECTION G-G

3/16" = 1'-0"

DETAIL 'A'

1/2" = 1'-0"

DETAIL 'B'

1/2" = 1'-0"

"V" GROOVE DETAILS (FOR BARRIER CURB & PARAPET)

** For Panel ① only

A1

B1

SUMMARY OF QUANTITIES - ABUTMENT

ITEM	AS BUILT	QUANTITY
Foundation Excavation	434.47	387 C.Y.
Class "B" Concrete in Structures Substructure	*	566 C.Y.
Class "C" Concrete in Structures	334.76	337 C.Y.
White Concrete Barrier Curb - Bridge	15.67	16 L.F.
Concrete Parapet (2'-3" High)	5.85	5 L.F.
Reinforcement Steel in Structure	42,543	42,550 Lbs.
Epoxy Waterproofing	430.37	428 S.F.
8" ϕ Corrugated Metal Pipe	160.0	163 L.F.
3" ϕ Rigid Metallic Conduit	33	33 L.F.
	* 560.22	

NOTES:

1. Work this Sheet with Sh. No. B4.
2. For Typical Drainage Section, Foundation Excavation Payment Limits, Anchor Bolts Details, Payment Limits for Epoxy Waterproofing, Expansion & Contraction Joints Details see Sh. No. B7
3. For Architectural Delineation of Abutment & Wingwalls see Sh. No. B4!
4. For General Plan & Elevation see Sh. No. B1
5. For Section X-X see Sh. No. B4

(B3 B45)

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY W. T. Dykman

APPROVED
DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

REVISION	BY	CKD.	DATE
S.H. ELEV. REVISION	F.L.	J.K.	11-13-68

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280 SECTION: 7D
MUNICIPALITY: NEWARK COUNTY: ESSEX

WEST ABUTMENT (E.B.) PART I

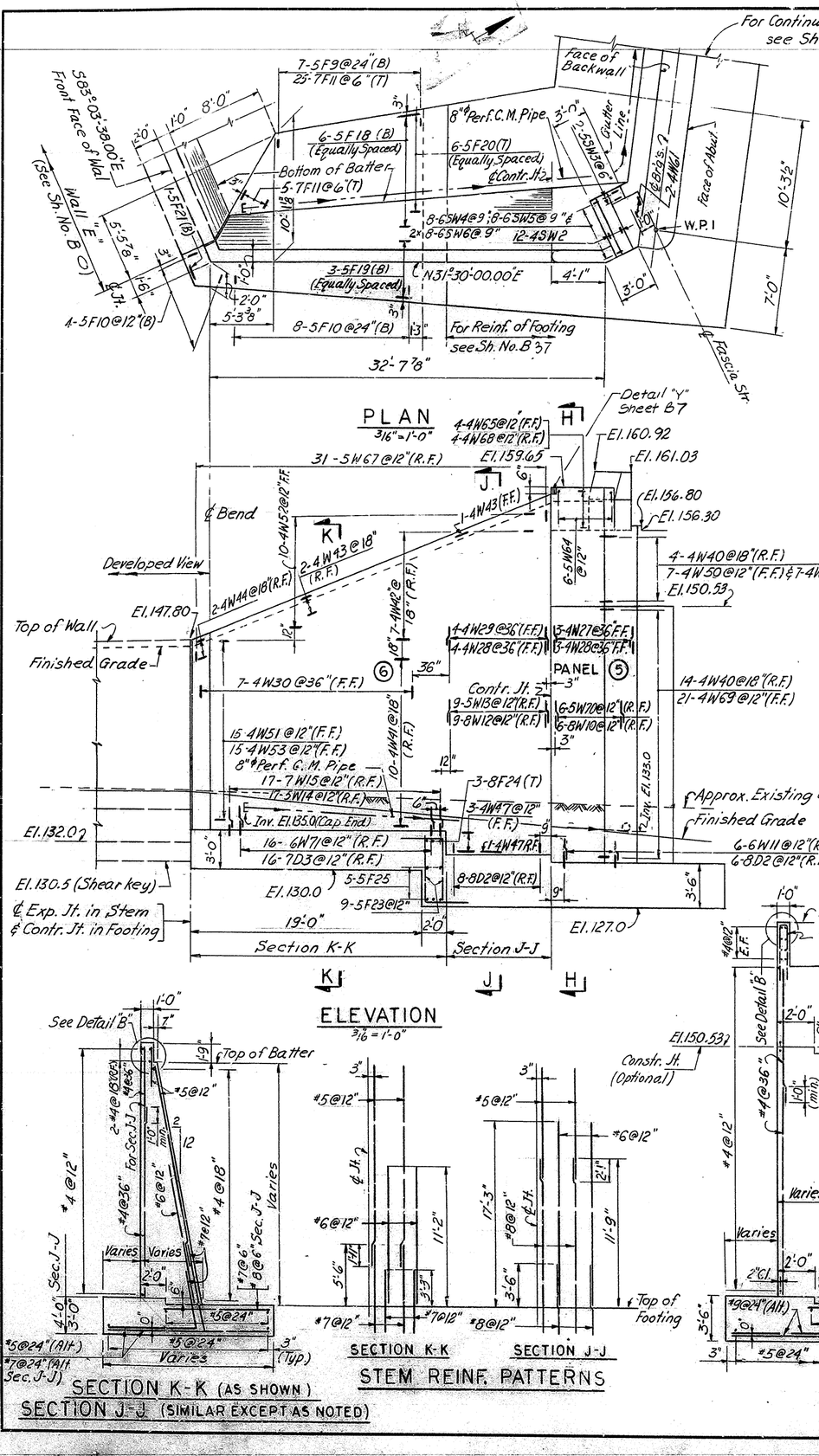
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS ENGINEERS
NEW YORK TRENTON

SCALE: As Shown
DATE: Jan. 1968
SHEET NO. 90 OF 132

IN CHARGE OF: L. Kaufman
CHECKED BY: C. Paul

0730-276-7

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
I	N.J.-I-280-6(36)60	N.J.	1967	91	132 / 133



BAR SCHEDULE

MARK	LENGTH	TYPE	PANELS 1	2	3	4	5	6	REMARKS	TOTAL
9F1	16'-0"	Str.	13	18	17	17	18			83
9F2	10"-0"	Str.	15	14	13	13	14			69
9F3	10'-4"	Str.	41	41	36	36	43			197
9F4	7'-6" to 11'-6"	Str.					10		Vary ea. bar by 5½"	10
9F5	8'-3" to 10'-9"	Str.					7		Vary ea. bar by 5"	7
7F6	15'-6" to 17'-3"	Str.					5		Vary ea. bar by 5"	5
8F7	10'-9"	Str.					17			17
7F8	9'-0"	Str.					4			4
5F9	12'-0" to 18'-0"	Str.						7	Vary ea. bar by 6"	7
5F10	7'-0"	Str.						12		12
7F11	10'-0"	Str.						30		30
5F12	31'-9"	Str.	15	15						30
5F13	28'-6"	Str.			15	15				30
5F14	32'-0" to 32'-8"	Str.					9		Vary ea. bar by 1"	9
5F15	30'-5" to 32'-8"	Str.					6		Vary ea. bar by 1"	6
5F16	12'-9" to 24'-4"	Str.					10		Vary ea. bar by 1½"	10
5F17	12'-9" to 17'-0"	Str.					7		Vary ea. bar by 8½"	7
5F18	14'-2" to 18'-8"	Str.						6	Vary ea. bar by 10¼"	6
5F19	20'-9" 21'-0" 20'-6"	Str.						3	One of each	3
5F20	14'-0" to 17'-9"	Str.						6	Vary ea. bar by 9"	6
5F21	5'-3"	A						1	a=2'-0", b=2'-3", c=1'-1"	1
5F22	7'-0"	C		18	18	18	18		a=b=3'-6", c=0"	72
5F23	8'-6"	C						18	a=5'-0", b=3'-6", c=0"	18
8F24	10'-0"	Str.						3		3
5F25	15'-0"	Str.						5		5
9F26	12'-8"	Str.	3							3
7D1	6'-0"	Str.	31	31	28	28	23			141
8D2	6'-3"	Str.						8		14
7D3	5'-6"	Str.						16		16
7W1	12'-3"	Str.	31	31	28	28	23			141
5W2	12'-0"	Str.	16							16
5W3	6'-3"	Str.	15							15
8W4	11'-9"	Str.	30	30	27	27	22			136
5W5	6'-9"	Str.		16						16
5W6	8'-3"	Str.		15	23	13				51
5W7	7'-0"	Str.			5					5
5W8	9'-6"	Str.				15	19			34
5W9	10'-3"	Str.					4			4
8W10	14'-6"	Str.					6			6
6W11	17'3"	Str.					6			6
8W12	15'-0"	Str.						9		9
5W13	13'-11" to 19'-1"	Str.						9	Vary ea. bar by 1½"	9
5W14	10'-0" to 18'-0"	Str.						17	Vary ea. bar by 6"	17
7W15	7'-9"	Str.						17		17
4W16	8'-11" to 9'-4"	Str.	3						Vary ea. bar by 2½"	3
4W17	17'-1"	Str.	6							6
4W18	7'-4"	Str.	4							4
4W19	15'-9"	Str.	5							5
4W20	14'-3"	Str.		6						6
4W21	17'-6"	Str.		5						5
4W22	16'-6"	Str.			2					2
4W23	17'-9"	Str.			8	5				13
4W24	19'-0"	Str.				5				5
4W25	18'-10"	Str.					6			6
4W26	19'-10"	Str.					5			5
4W27	10'-4"	Str.					3			3
4W28	16'-6"	Str.					3	4		7
4W29	9'-3" to 12'-6"	Str.						4	Vary ea. bar by 1'-1"	4
4W30	14'-6" to 21'-6"	Str.						7	Vary ea. bar by 1'-2"	7
4W31	27'-0"	Str.	17							17
4W32	7'-0"	Str.	17							17
4W33	29'-9"	Str.	17	43						60
4W34	13'-3"	Str.		2						2
4W35	26'-6"	Str.			43	46	7			96
4W36	21'-6"	Str.			2					2

MARK	LENGTH	TYPE	PANELS 1	2	3	4	5	6	REMARKS	TOTAL
4W37	14'-2"	Str.				2				2
4W38	23'-0"	Str.					21			21
4W39	7'-0"	Str.					2			2
4W40	7'-8"	Str.					18			18
4W41	26'-3" to 27'-0"	Str.						10	Vary ea. bar by 1"	10
4W42	2'-0" to 25'-1"	Str.						7	Vary ea. bar by 3'-10½"	7
4W43	30'-0"	Str.						3		3
4W44	2'-6"	A						2	a=1'-3", b=9", c=3'-3" *	2
4N45	15'-5"	Str.	7							7
4W46	5'-3"	A	7						a=1'-3", b=4'-0", c=1'-6"	7
4W47	8'-0"	Str.	4					4		8
4W48	25'-3"	Str.					20			20
4W49	5'-8"	B					21		a=2'-6", b=1'-11", c=1'-3"	21
4W50	5'-0"	D					7		a=c=1'-3", b=2'-6", d=1'-2", e=9"	7
4W51	28'-4"	Str.						15		15
4W52	3'-9" to 28'-8"	Str.						10	Vary ea. bar by 2'-9½"	10
4W53	2'-4"	A						15	a=1'-3", b=1'-1", c=4"	15
6W54	4'-7"	C	4	8	4	8	8		a=3'-1", b=1'-6", c=0"	32
6W55	4'-0"	Str.	4	8	4	8	8			32
4W56	14'-6"	Str.	7							7
4W57	16'-0"	Str.		2						2
4W58	4'-6"	Str.			2					2
4W59	11'-9½"	Str.				2				2
4W60	18'-0"	Str.					2			2
4W61	3'-9"	C	6				2		a=c=1'-8", b=5"	8
5W62	17'-0"	C	15		28		23		a=c=8'-0", b=1'-0"	66
5W63	15'-0"	C		31		28			a=c=7'-6", b=1'-0"	59
5W64	11'-0"	C					6		a=c=5'-0", b=1'-0"	6
4W65	5'-5"	A					4		a=3'-11", b=1'-6", c=1'-4"	4
4W66	3'-9"	Str.					7			7
5W67	3'-5"	Str.						31		31
4W68	5'-0"	A					4		a=3'-9", b=1'-3", c=1'-2"	4
4W69	8'-5"	A					21		a=3'-10", b=4'-7", c=4'-1"	21
5W70	16'-7"	Str.					6			6
6W71	11'-2"	Str.						16		16
45W2	4'-6"	Str.					12			12
55W3	6'-7"	C					3		a=4'-1", b=2'-6", c=0"	3
65W4	4'-8"	C					8		a=4'-0", b=8", c=0"	8
65W5	3'-5"	A					8		a=1'-3", b=2'-2", c=2'-1"	8
65W6	4'-4"	Str.					16			16
65W7	2'-11"	A	7						a=8", b=2'-3", c=4"	7
65W8	5'-11"	A	7						a=3'-8", b=2'-3", c=1'-9½"	7
65W9	4'-1½"	D	19						a=c=1'-8", b=9½", d=1'-8", e=1'-5½"	19
6SW10	8'-2"	E	12						a=5'-3", b=8", c=2'-3", d=4"	12
6SW11	15'-8	Str.	6							6
6SW12	15'-0"	Str.	5							5
4SW13	2'-3"	Str.	10							10

* Bend in field as required.

LEGEND

9F1; 9=Bar Size, F1=Bar Number
F.F. = Front Face, R.F. = Rear Face, E.F. = Each Face
T. = Top, B= Bottom.

NOTES:

1. For Notes see Sh. No. B3
2. All dimensions given are out to out of bars.
3. Cut standard footing reinf. around Drop Inlet as required.

64 B-45

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY T. O. Parsons

APPROVED

DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

REVISION	BY	CKD.	DATE

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280 SECTION: 7D
MUNICIPALITY: NEWARK COUNTY: ESSEX

WEST ABUTMENT (E.B.) PART II

PARSONS, BRINCKERHOFF, QUADE & DOUGLAS ENGINEERS
NEW YORK TRENTON

SCALE: As Shown
DATE: Jan. 1968
SHEET NO. 91 OF 132 (133)

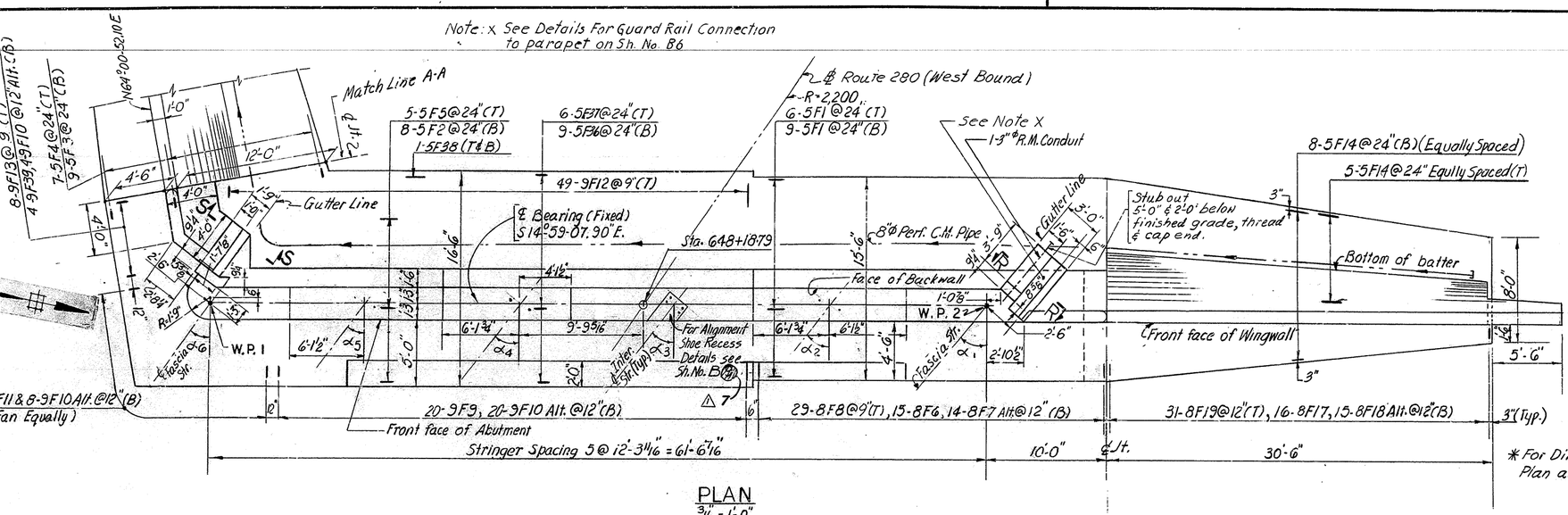
IN CHARGE OF ... CHECKED BY ...

0730 091 133 277

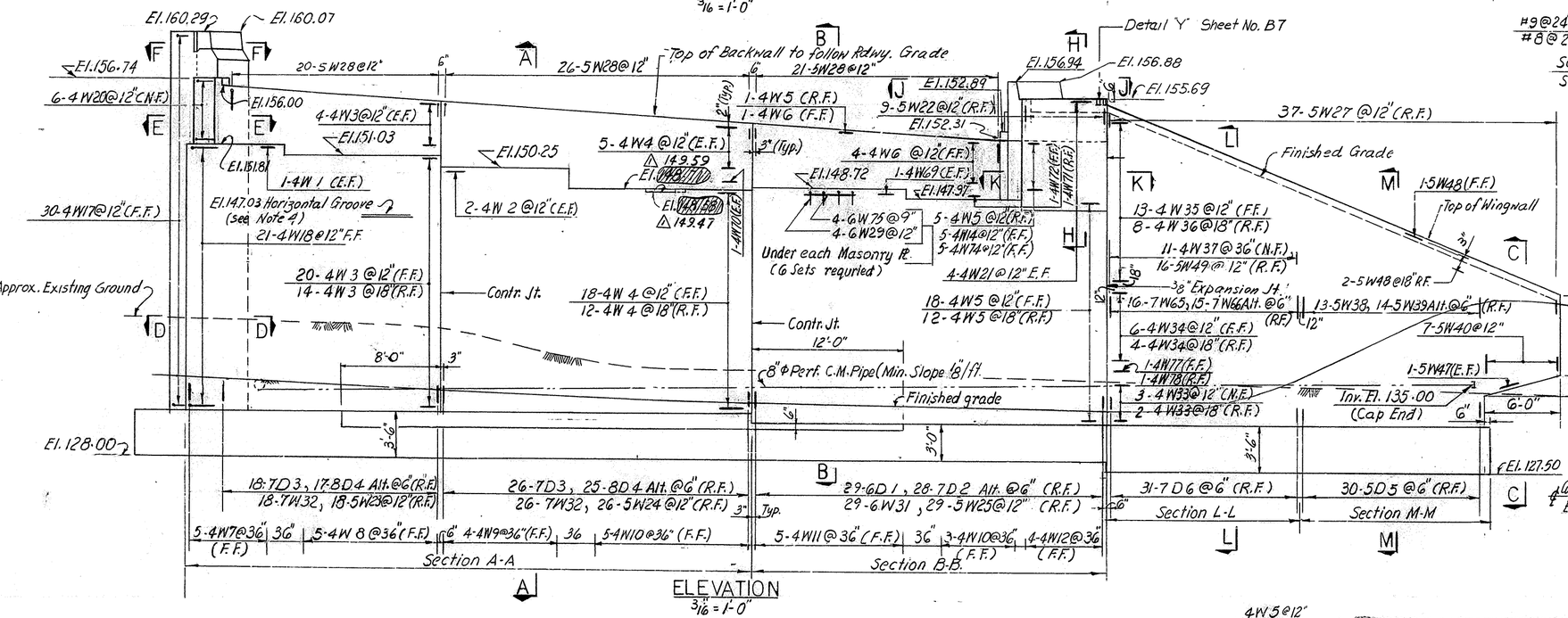
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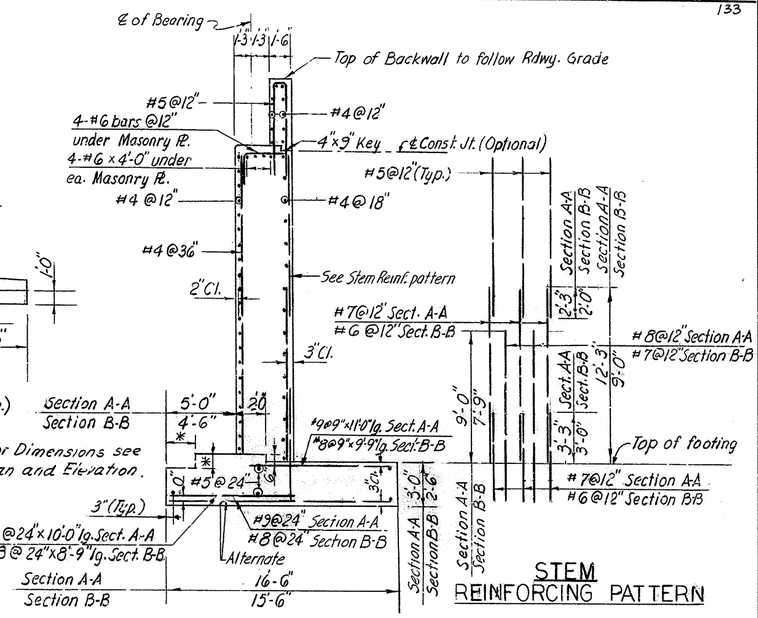
FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
I	N.J-I-280-6(36)60	N.J.	1967	92	~~132~~ 133

Note: x See Details For Guard Rail Connection to parapet on Sh. No. B6



PLAN
3/16" = 1'-0"



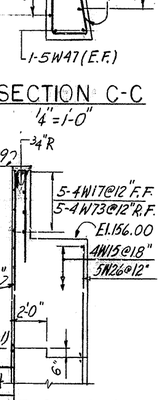


STEM REINFORCING PATTERN

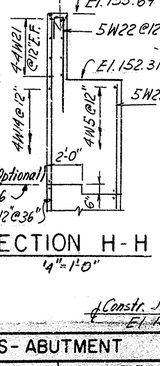
SECTIONS A-A & B-B
3/16" = 1'-0"

SKEW ANGLES OF STRINGERS*	
α_1	40° 36' 49"
α_2	40° 00' 01"
α_3	39° 19' 16"
α_4	38° 33' 54"
α_5	37° 43' 06"
α_6	36° 45' 51"

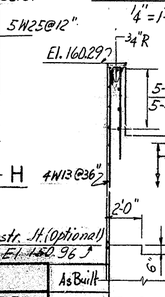
* Angles shown to be used for setting anchor bolts only



SECTION C-C
1/4" = 1'-0"

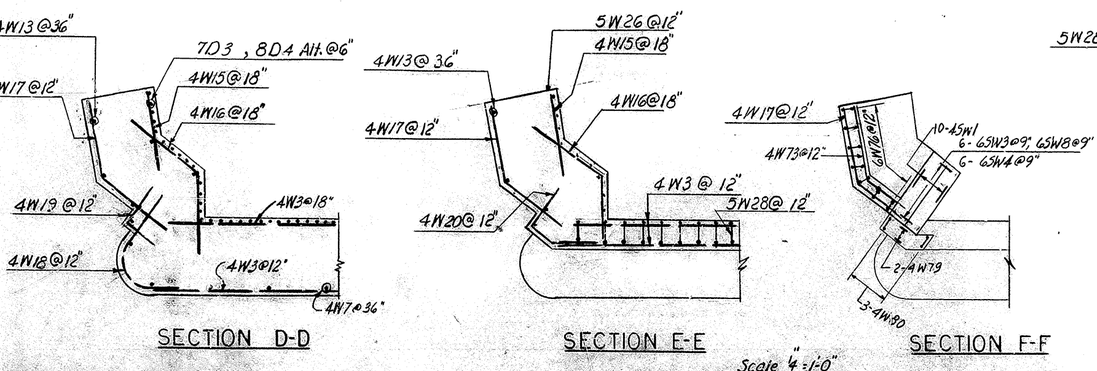


SECTION H-H
1/4" = 1'-0"



SECTION G-G
1/4" = 1'-0"

NOTES:
1. For General Plan & Elevation see Sh. No. B1
2. Work this Sheet with Sh. No. B6
3. For Typical Drainage Section, Foundation Excavation Payment Limits, Anchor Bolts Details, Payment Limits for Epoxy Waterproofing, Expansion & Contraction Joint Details see Sh. No. B7
4. For Architectural Delineation of Abutment & Wingwalls see Sh. No. B 41
5. For Sections R-R, S-S, L-L & M-M see Sh. No. B6
6. For location of Sec. G-G see Sh. No. B6



SUMMARY OF QUANTITIES - ABUTMENT		As Built
ITEM	QUANTITY	
Foundation Excavation	471 C.Y.	357.38
Class "B" Concrete in Structures-Substructure	430 C.Y.	406.63
Class "C" Concrete in Structures	268 C.Y.	268.66
Reinforcement Steel in Structures	34,100 Lbs.	32,355
Epoxy Waterproofing	208 S.F.	209.66
8"ϕ Corrugated Metal Pipe	158 L.F.	167
White Concrete Barrier Curb-Bridge	4 L.F.	355
Concrete Parapet (2'-3" High)	5 L.F.	4.91
3"ϕ Rigid Metallic Conduit	12 L.F.	12

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY Yo. T. Eckman

APPROVED
DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

REVISION	BY	CKD.	DATE
△ Elevations	J.G.	R.D. P.B.Q.D. J.H.D.	8-15-68

65 B-45

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280
MUNICIPALITY: NEWARK
SECTION: 7D
COUNTY: ESSEX

WEST ABUTMENT (W.B) PART I

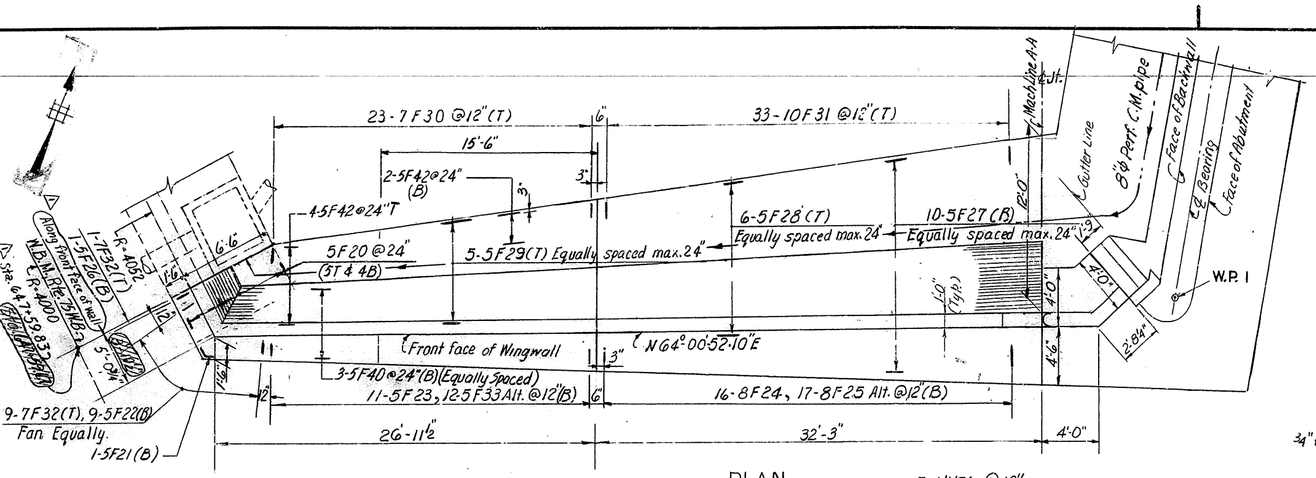
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
ENGINEERS
NEW YORK TRENTON

SCALE: As Shown
DATE: Jan. 1968
SHEET NO. 92 OF ~~132~~ 133

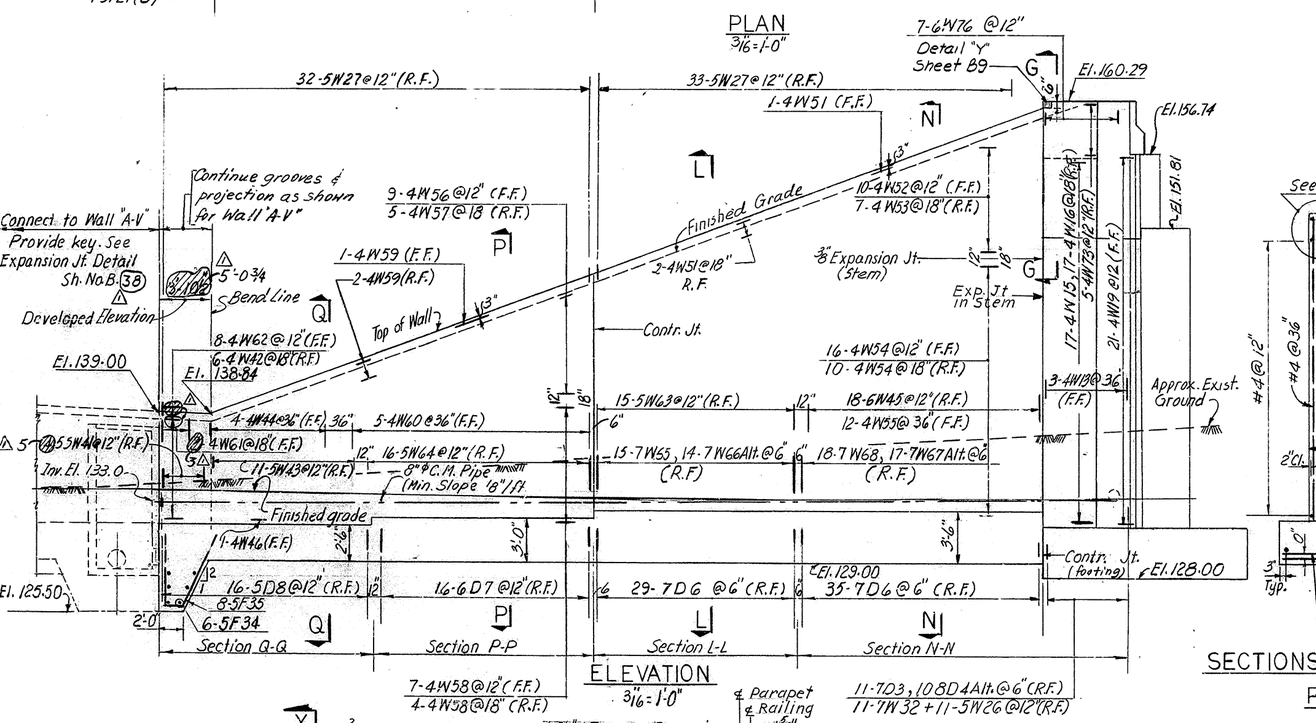
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0730-276-7

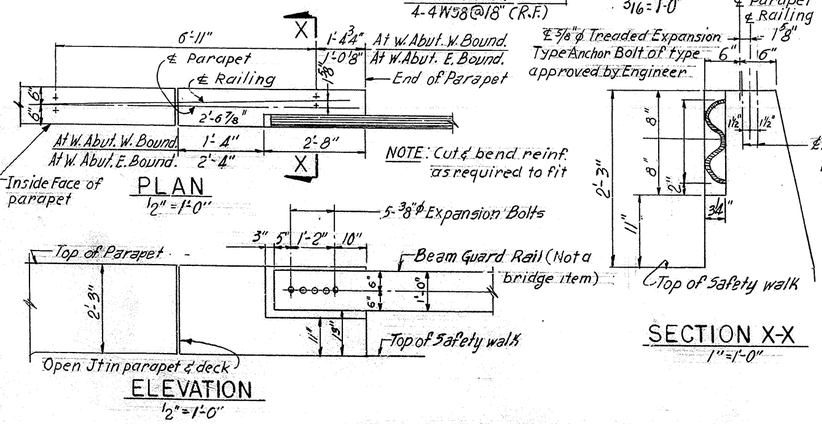
FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
I	N.J.-I-280-6(36)60	N.J.	1967	93	~~132~~ 133



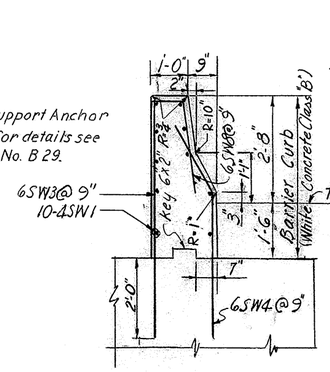
PLAN
3/16"=1'-0"



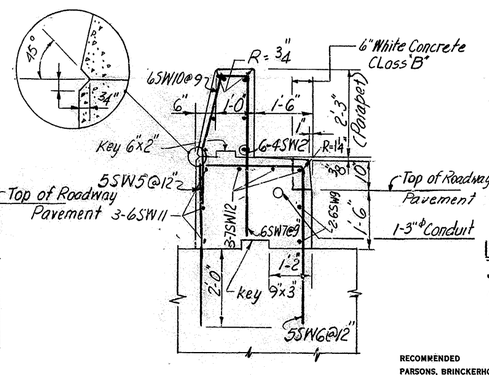
ELEVATION
3/16"=1'-0"



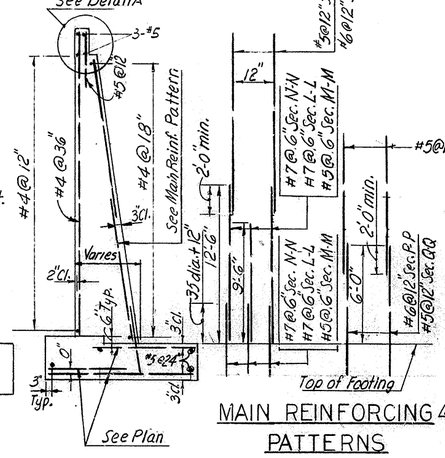
DETAILS FOR GUARDRAIL CONNECTION TO PARAPET AT W. ABUTMENTS
(E.B. Abut shown, W.B. Abut similar)



SECTION S-S
½"=1'-0"

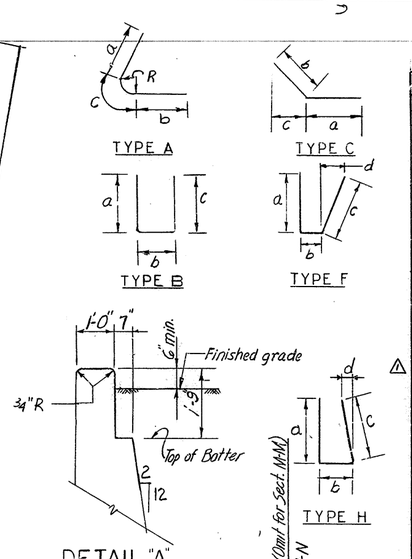


SECTION R-R
½"=1'-0"



SECTIONS L-L M-M N-N
P-P & Q-Q

MAIN REINFORCING PATTERNS



BAR SCHEDULE

MARK	LENGTH	TYPE	REMARKS	TOTAL	MARK	LENGTH	TYPE	REMARKS	TOTAL
5F1	29'-0"	Str.		15	4W36	29'-6"to3'-9"	Str.	Vary ea. bar by 3'-9"	8
5F2	27'-0"			8	4W37	23'-9"to12'3"		Vary ea. bar by 1'-2"	11
5F3	13'-9"to16'11"		Vary ea. bar by 4'4"	10	5W38	9'-6"			13
5F4	13'-0"			7	5W39	11'-4"to16'2"	Str.	Vary ea. bar by 4.3⅜"	14
5F5	27'-0"			5				a=5'-9"to9'2" Vary "a" by 10¼" b=1'-1"to 2'-3" Vary "b" by 1" c=4'-0"to 7'-4" Vary C. by 10" d=8"to 1'-3" Vary "d" by 1¼"	
8F6	15'-0"			15	5W40	11'-8"to18'-9"	H		5
8F7	8'-9"			14					
8F8	9'-9"			38	5W41	6'-0" △	Str.		3
9F9	16'-0"			20	4W42	(3.97) 5'-0"			6
9F10	10'-0"			32	5W43	6'-0"to 2'-0"		Vary ea. bar by 5"	11
9F11	9'-0"			7	4W44	7'-0"to10'-0"		Vary ea. bar by 1'-0"	4
9F12	11'-0"			49	6W45	9'-3"to15'-3"		Vary ea. bar by 4'4"	18
9F13	12'-6"			8	4W46	11'-0"			1
5F14	30'-0"			13	5W47	7'-6"			2
					5W48	37'-3"			3
8F17	7'-6"to 15'-0"		Vary ea. bar by 6"	16	5W49	12'-3"to 6'-3"		Vary ea. bar by 4"	16
8F18	9'-2"to 6'-2"		Vary ea. bar by 2½"	15	4W51	33'-9"			3
8F19	8'-6"to 6'-0"		Vary ev. 3 bars by 3"	31	4W52	6'-3"to 30'-0"		Vary ea. bar by 2'-10½"	10
5F20	(3.97) 5'-5"	Str.		9	4W53	2'-9"to 29'-8"		Vary ea. bar by 4'-1"	7
5F21	2'-6"	C	a=b=1'-3", c=6"	1	4W54	31'-9"			36
5F22	6'-0"	Str.		9	4W55	15'-6"to 24'-9"		Vary ea. bar by 1'-0½"	12
5F23	4'-4"			11	4W56	24'-4"to 2'-0"		Vary ea. bar by 2'-9½"	19
8F24	7'-9"to 9'-0"		Vary ev. 3 bars by 3"	16	4W57	6'-3"to 23'-5"		Vary ea. bar by 4'-3½"	3
8F25	16'-9"to 11'-5"		Vary ea. bar by 4"	17	4W58	26'-6"			11
5F26	7'-6"			1	4W59	28'-0"			3
5F27	33'-0"			10	4W60	10'-4"to 15'-0"		Vary ea. bar by 1'-4"	5
5F28	31'-9"			6	4W61	7'-2"	Str.	1'-8" 22'-0"	23 △
5F29	16'-3"			18	4W62	(3.97) 6'-4"	△C	a=1'-5", b=(3.97) c=(3.97) △	8
7F30	7'-0"to 5'-7"		Vary ev. 2 bars by 1½"	23	5W63	4'-9"to 9'-0"	Str.	Vary ea. bar by 4"	15
10F31	10'-9"to 8'-6"		Vary ea. bar by 1"	33	5W64	5'-3"to 10'-6"		Vary ev. bar by 4"	16
7F32	5'-6"			10	7W65	12'-6"			31
5F33	11'-4"to 7'-6"		Vary ea. bar by 4"	12	7W66	9'-6"			29
5F34	7'-6"	Str.		6	7W67	9'-6"			17
5F35	11'-6"	F	a=5'-0"; b=1'-6"; c=5'-6"; d=2'-6"	8	7W68	12'-6"			18
5F36	26'-6"	Str.		9	4W69	11'-11"			2
5F37	25'-7"			6	4W70	14'-0"			2
5F38	16'-0"			2	4W71	16'-0"			1
9F39	17'-0"			4	4W72	8'-5"	Str.		1
5F40	27'-9"			3	4W73	6'-10"	C	a=3'-6", b=3'-4", c=2'-6"	5
5F41	24'-0"			2	4W74	4'-6"	Str.		5
5F42	12'-0"	Str.		4	6W75	4'-0"	Str.		24
					6W76	8'-4"	B	a=1'-3", b=7", c=6'-6"	7
					4W77	30'-9"	Str.		1
6D1	5'-3"	Str.		29	4W78	29'-0"	Str.		1
7D2	10'-0"			28	4W79	2'-0"			4
7D3	6'-0"			55	4W80	2'-5"	B	a=c=1'-0", b=5"	5
8D4	11'-9"			52	42W1	3'-8"	Str.		10
5D5	4'-7"			30	45W2	5'-0"	Str.		6
7D6	5'-4"			95	6SW3	6'-0"	Str.		6
6D7	8'-9"			16	6SW4	6'-11"	C	a=3'-8", b=3'-3", c=1'-10"	6
5D8	7'-9"	Str.		16	5SW5	4'-4"	Str.		6
					7SW6	6'-8"	B	a=2'-6", b=1'-2", c=0°	5
					6SW7	4'-9"	B	a=8", b=1'-0", c=0°	9
4W1	6'-0"	Str.		2	6SW8	4'-5"	C	a=8", b=3'-9", c=4"	6
4W2	9'-11"			4	6SW9	3'-4"	Str.		2
4W3	18'-3"			42	6SW10	3'-8"	C	a=1'-2", b=2'-2", c=2'-9"	9
4W4	24'-3"			40	6SW11	4'-8"	Str.		3
4W5	27'-11"			36	7SW12	9'-7"	B	a=4'-2", b=3'-5", c=2'-0"	3
4W6	21'-2"			5					
4W7	20'-0"			5					
4W8	19'-3"			5					
4W9	18'-6"			4					
4W10	(3.97) 17'-8"			8					
4W11	17'-6"			5					
4W12	24'-6"			4					
4W13	28'-6"	Str.		3					
4W14	9'-10"	F	a=1'-9", b=1'-3", c=6'-10", d=2'-1"	5					
4W15	4'-0"	Str.		17					
4W16	8'-6"	C	a=b=4'-3", c=2'-6"	17					
4W17	7'-4"	C	a=3'-9", b=3'-7", c=2'-8"	30					
4W18	7'-8"	A	a=2'-8", b=1'-8", c=3'-4", R=1'-7"	21					
4W19	3'-9"	B	a=2'-0", b=1'-9", c=0°	21					
4W20	5'-11"	F	a=2'-5", b=1'-10" c=1'-8", d=1'-4"	6					
4W21	8'-1"	C	a=6'-10", b=1'-3", c=1'-1"	8					
5W22	7'-1"	B	a=1'-3", b=8", c=5'-2"	11					
5W23	11'-0"	Str.		18					
5W24	9'-0"			26					
5W25	11'-6"			29					
5W26	15'-2"			11					
5W27	3'-6"	Str.		102					
5W28	15'-6"	B	a=c=7'-3", b=1'-0"	67					
6W29	4'-6"	B	a=1'-6", b=2'-11", c=0°	24					
6W30	9'-0"	Str.		29					
7W32	12'-3"			57					
4W33	29'-6"			5					
4W34	35'-6"			10					
4W35	33'-9"to 3'-9"	Str.	Vary ea. bar by 2'-6"	18					

NOTES:
1. For Notes see Sh. No. B5
2. All reinf. dimensions given are out to out of bars.
3. For Sec. G-G see Sh. No. B5
4. For location of Sec. L-L & M-M see Sh. No. B5 & this sheet

(B6 B45)

LEGEND:
5F1; 5=Bar Size, F1=Bar Number
F.F. = Front face, R.F. = Rear Face, E.F. = Each face
T. = Top, B = Bottom.

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY [signature]

APPROVED
DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

△ REVISION	BY	CKD.	DATE
Dimens & Reinf.	J.C.	R.B.Q. JHO	8-15-68

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280 SECTION: 7D
MUNICIPALITY: NEWARK COUNTY: ESSEX

WEST ABUTMENT (W.B.) PART II

PARSONS, BRINCKERHOFF, QUADE & DOUGLAS ENGINEERS
NEW YORK TRENTON

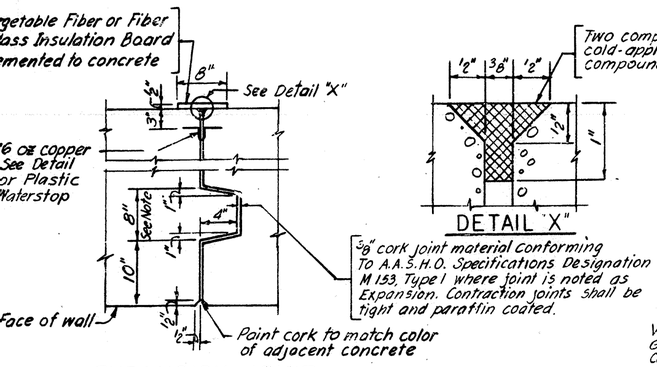
SCALE: As Shown
DATE: Jan. 1968
SHEET NO. 93 OF ~~132~~ 133

0730 093 133 277

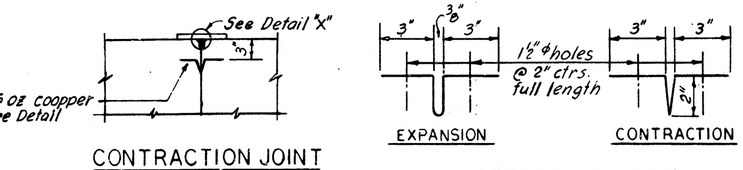
FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-I-280-6(36)60	N.J.	1967	94	~~132~~ 133

Note "A": Provide plywood form surface finish for face of Abutment and walls, 4'x8' panels similar to details shown on Sheet No. B41.

Surface of concrete to be covered with Epoxy Waterproofing entire length of bridge seat as per Supplementary Specifications.



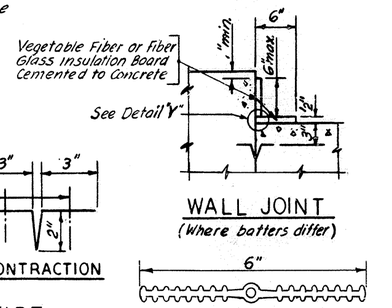
EXPANSION JOINT
1" = 1'-0"



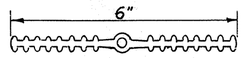
CONTRACTION JOINT

16 oz COPPER 10" WIDE

for Keys
ys are to stop 1'-0" from all exposed faces concrete or where wall thickness is less 2'-4".

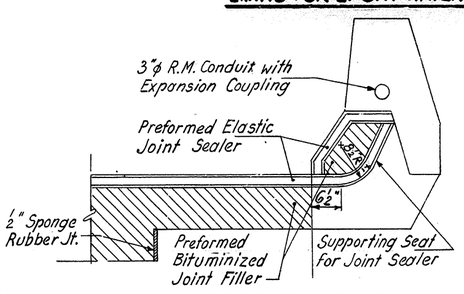


WALL JOINT
(Where batters differ)

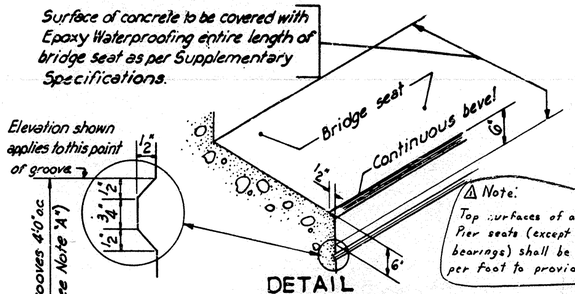


DETAIL OF PLASTIC WATERSTOP
(See Supplementary Specifications.)

WALL JOINT DETAILS

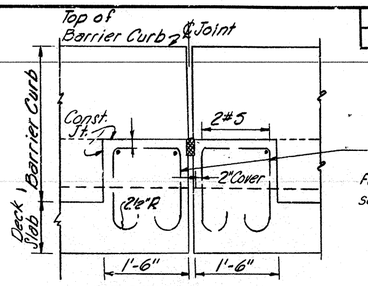


SECTION M-M
Scale 3/4"=1'-0"

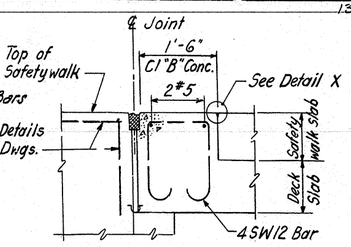


DETAIL
VIEW SHOWING BEVELS AND PAYMENT LIMITS FOR EPOXY WATERPROOFING

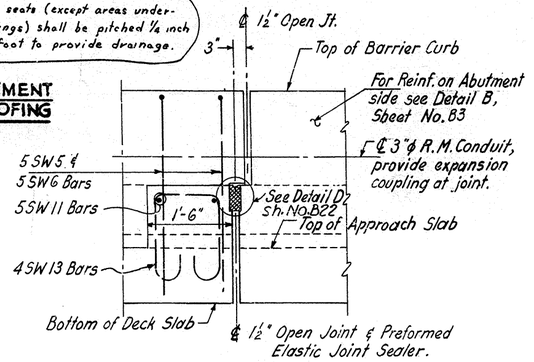
△ Note:
Top surfaces of abutments and Pier seats (except areas under bearings) shall be pitched 1/4 inch per foot to provide drainage.



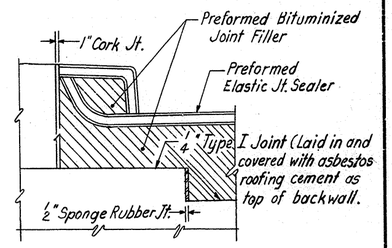
SECTION R-R



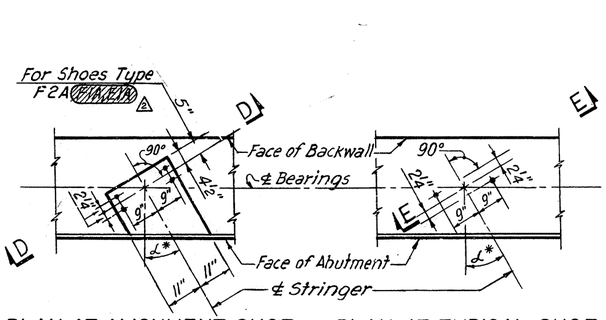
SECTION C-C
SECTION C'-C' opposite hand
Scale 3/4"=1'-0"



SECTION H-H
Scale 3/4"=1'-0"

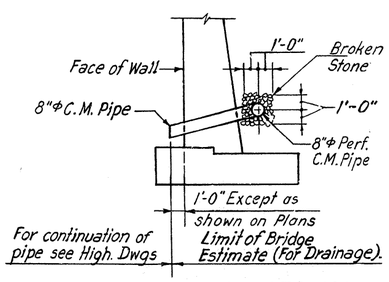


SECTION J-J
SECTION J'-J' opposite hand
Scale 3/4"=1'-0"

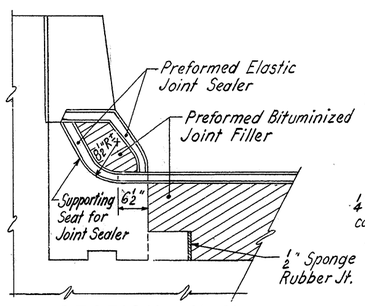


PLAN AT ALIGNMENT SHOE PLAN AT TYPICAL SHOE

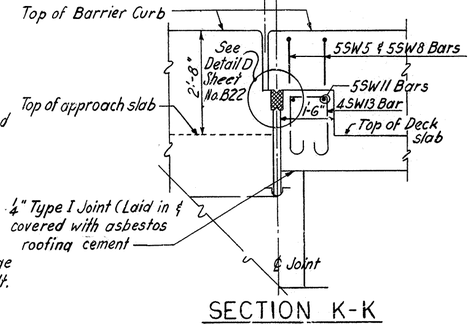
* See Abutment drawings for skew angles.



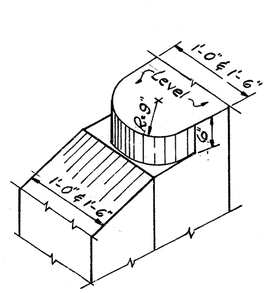
TYPICAL DRAINAGE SECTION FOR ABUTMENTS & WING WALLS



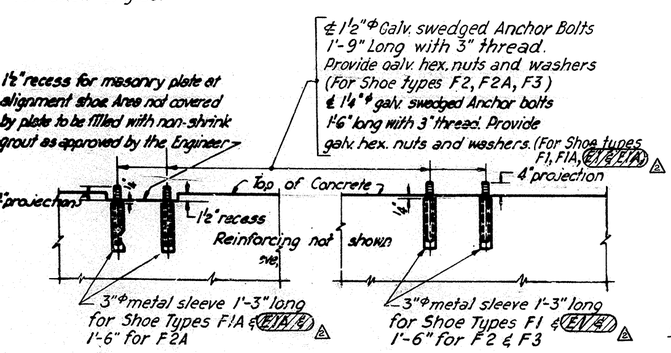
SECTION N-N
Scale 3/4"=1'-0"



SECTION K-K
1/2" = 1'-0"



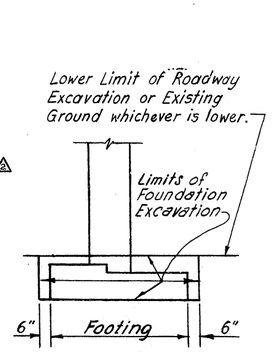
DETAIL "Y"
(see Abutment sheets)



SECTION D-D SECTION E-E

ANCHOR BOLT DETAILS
1/2" = 1'-0"

NOTE:
For location of Anchor Bolts see Abutment D'w'gs



FOUNDATION EXCAVATION & PAY LIMITS

Note:
For Location of Sections C-C, J-J, H-H, K-K M-M, N-N & R-R see Sh. No. B22

87 6-45

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY W. T. Dykman

APPROVED

DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

REVISION	BY	CKD.	DATE
△ Shoe Type Del.	B.E. / R.D.	J.K. / H.O.	8-22-68
△ As per Addendum 1	J.R.M.	G.S.C.	7-15-68

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280 SECTION: 7D
MUNICIPALITY: NEWARK COUNTY: ESSEX

ABUTMENT DETAILS

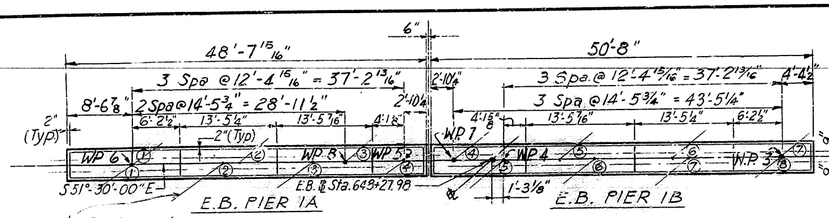
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
ENGINEERS
NEW YORK TRENTON

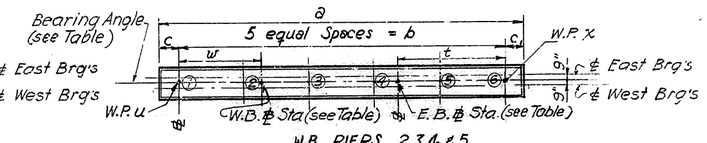
SCALE: As Shown
DATE: Jan. 1968
SHEET NO. 94 OF ~~132~~ 133

0730 0 94 133 277

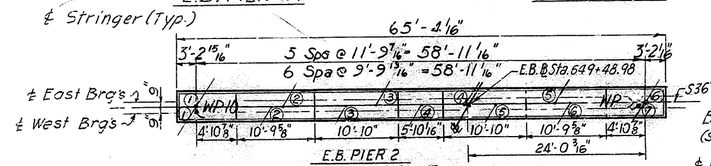
07.30 276-7

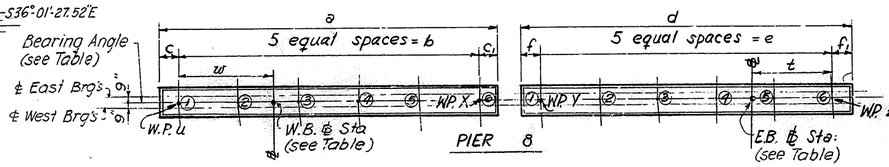
FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-I-280-6(36)60	N.J.	1967	95	~~132~~ 133

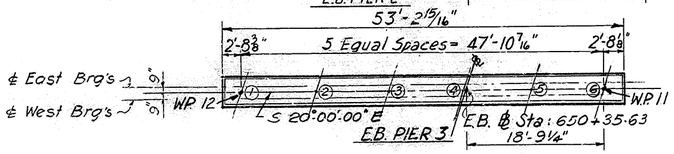




W.B. PIERS 2,3,4 & 5
E.B. PIERS 4 & 5







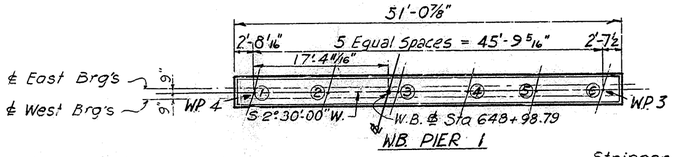


TABLE FOR PIER STATIONS AND BEARING ANGLES		
LOCATION	STATION	BEARING ANGLE
PIER #2 - W.B.	649 + 78.79	S 17°-00'-51.71 W.
" #3 - "	650 + 55.79	S 13°-29'-05.83 W.
" #4 - "	651 + 32.79	S 10°-13'-34.16 W
" #5 - "	652 + 09.79	S 8°-24'-16.19 W
" #8 - "	656 + 65.00	N 14°-56'-35.31 E
" #4 - E.B.	651 + 27.63	N 1°-20'-10.00 E
" #5 - "	652 + 27.63	N 1°-38'-54.64 E
" #8 - "	656 + 55.96	N 14°-56'-35.31 E

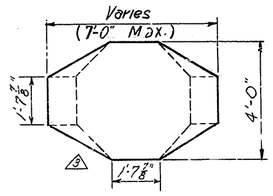
Note: For Piers not shown, see "Pier Top Plan" on this sheet.

Stringer number marked thus ○ correspond to numbers in Table on sh. No. B9

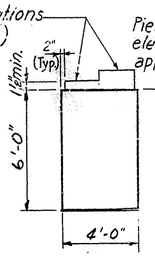
PIER TOP PLAN

1" = 10'-0"

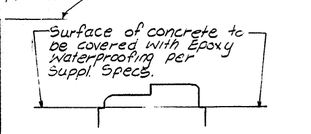
Step bearing seats for Piers 1A, 1B, 2E.B. as shown.
Step bearing seats for all others at midway between ℄ of stringers. (Not Shown)



SECTION A-A
3/8" = 1'-0"



SECTION B-B
1/4" = 1'-0"



PAYMENT LIMITS FOR EPOXY WATERPROOFING

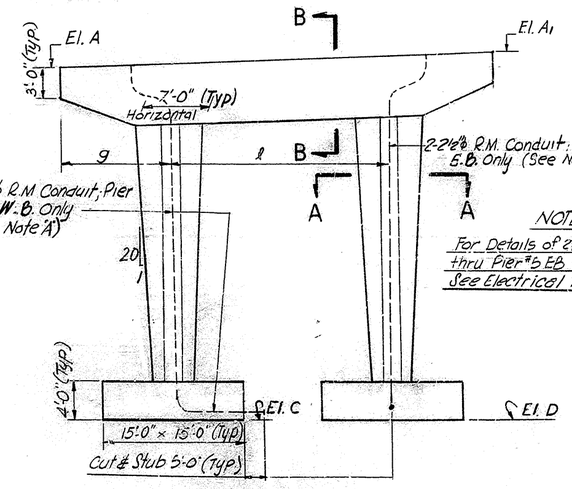
PIER DIMENSIONS & ELEVATIONS & W. P. NUMBERS *

		E.B. #1A	E.B. #1B	E.B. #2	E.B. #3	E.B. #4	E.B. #5	W.B. #1	W.B. #2	W.B. #3	W.B. #4	W.B. #5	E.B. W.B. #8			
TYPE		I	I	I	I	I	I	I	I	I	I	I	II			
PIER CAP & COLUMNS	a	—	—	—	—	48'-3 3/8"	47'-3 1/16"	—	46'-1 3/16"	45'-1 1/16"	45'-0	45'-0	45'-0"			
	b	—	—	—	—	43'-3 3/8"	42'-3 1/16"	—	41'-1 3/16"	40'-1 1/16"	40'-0	40'-0	38'-6			
	c	—	—	—	—	2'-6"	2'-6"	—	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"			
	c1	—	—	—	—	2'-6"	2'-6"	—	2'-6"	2'-6"	2'-6"	2'-6"	4'-0"			
	d	—	—	—	—	—	—	—	—	—	—	—	44'-0			
	e	—	—	—	—	—	—	—	—	—	—	—	37'-6			
	f	—	—	—	—	—	—	—	—	—	—	—	2'-6"			
	f1	—	—	—	—	—	—	—	—	—	—	—	4'-0"			
	g	12'-2"	12'-8"	16'-4 6	13'-3 11/16	12'-0 7/8	11'-9 3/4	12'-9 1/4	11'-6 5/16	11'-3 1/4	11'-3	11'-3	11'-3			
	g1	—	—	—	—	—	—	—	—	—	—	—	~~11'-0~~	5	See note 6	
	l	24'-5 15/16	25'-4"	32'-8 1/4	26'-7 5/16	26'-1 1/8	23'-7 9/16	25'-6 3/8	23'-0 9/16	22'-6 9/16	22'-6	22'-6	22'-6			
	l1	—	—	—	—	—	—	—	—	—	—	—	~~22'-0~~	5	See note 6	
	J	—	—	—	—	—	—	—	—	—	—	—	~~25'-10 5/8~~	5	See note 6	
	w	—	—	—	—	—	—	—	14'-1 3/16	13'-1 1/16	13'-0"	13'-0"	13'-0"			
	t	—	—	—	—	16'-3 5/8	15'-3 1/16	—	—	—	—	—	10'-6"			
ELEVATIONS	A	147.81	150.59	153.34	154.86	155.66	155.25	150.08	152.34	153.63	154.28	153.17	140.78			
	A1	150.53	153.45	155.76	155.93	155.85	154.64	153.20	154.90	156.10	156.61	154.74	138.16			
	B												140.02			
	B1												137.45	4		
	C	128.0	130.0	127.0	126.0	123.0	117.0	126.0	121.0	123.0	122.0	118.0	~~110.0~~ 106.0			
	D	128.0	130.0	127.0	126.0	123.0	117.0	126.0	121.0	123.0	122.0	118.0	102.0			
	E	—	—	—	—	—	—	—	—	—	—	—	~~102.0~~	4	See note 6	
	F	—	—	—	—	—	—	—	—	—	—	—	~~**~~	5	See note 6	
W.P. NUMBERS	u	—	—	—	—	14	16	—	6	8	10	12	18			
	x	—	—	—	—	13	15	—	5	7	9	11	17			
	y	—	—	—	—	—	—	—	—	—	—	—	22			
	z	—	—	—	—	—	—	—	—	—	—	—	21			

* For Dimensions, Elevations & W.P. Numbers, not shown see "Pier Top Plan" on this sheet.
~~** Footing incorporated with existing wall - see sheet No. B11~~ 5

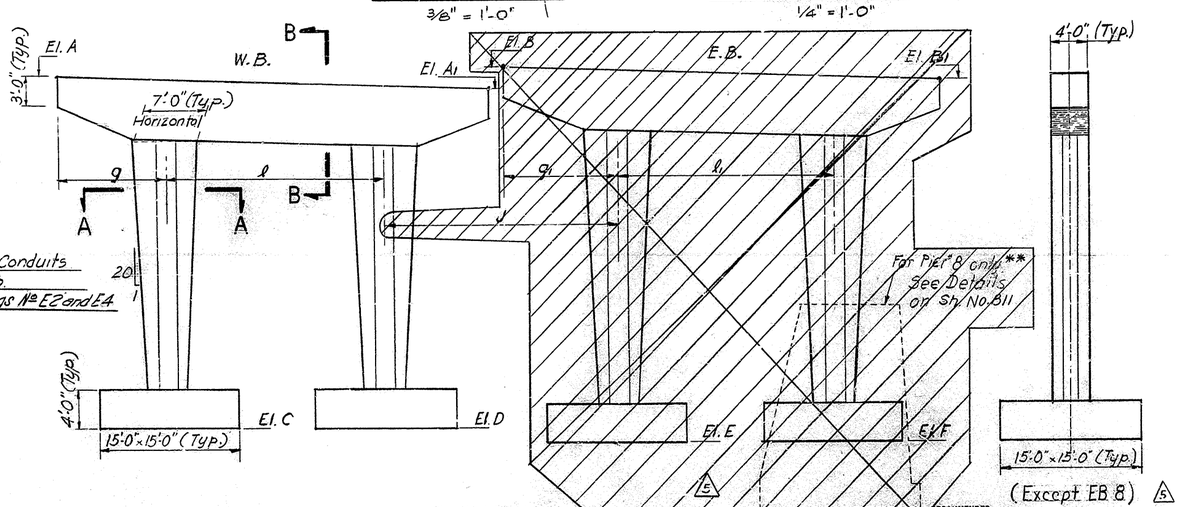
△ Note: Top Surfaces of abutments and pier seats (except areas under bearings) shall be pitched 1/4 inch per foot to provide drainage.

NOTES:
1) For pier seat elevations & stringer skew angles see Sh. No. B9
2) For pier reinforcement details and bar schedule see Sh. No. B10
3) For piers *6 & *7 see Sh. No. B11
4) For foundation excavation payment limits see Sh. No. B9
5) For Revised pier EB 8 see Supplementary sh. No. B11S. 5
6) For new dimensions & elevations see sh. No. B11S. 5



TYPE: I

NOTE: A
For Details of 2 1/2" R.M. Conduits thru Pier #5 E.B. and W.B. See Electrical Drawings No. E2 and E4



TYPE: II

TYPICAL PIER ELEVATIONS

(LOOKING UP STATION)
NOT TO SCALE

SUMMARY OF QUANTITES - PIERS (1)

ITEM	QUANTITIES WEST BOUND	QUANTITIES EAST BOUND	
Foundation Excavation	~~1070~~ C.Y. (1005.1)	△(709) C.Y.	~~796~~ 801.60
Class "B" Concrete-Sub	~~425~~ C.Y. (428.0)	△(418) C.Y.	~~588~~ 567.16
Class "C" Concrete	400 C.Y.	~~433~~ C.Y.	519.65
Reinforcement Steel	~~92125~~ Lbs. (86,500)	~~115502~~ Lbs.	141,309
Epoxy Waterproofing	~~7555~~ S.F. (6802.5)	~~2002~~ S.F.	1914.20
2 1/2" R.M. Conduit	~~142~~ L.F. (128.8)	~~92~~ L.F.	105.9
(2) Alteration of Existing Masonry Wall (R.R. Wall North)		L.S.	100%

(1) Quantities do not include Piers #6 and #7

(2) At Pier #8 E.B.

B8 B-45

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY T. T. Redman

APPROVED

DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

REVISION	BY	CKD.	DATE
5 Revision of Pier EB 8	S.A.	J.K.	2-24-69
4 Ftg. Elev.	W.D.	J.K.H.	1/15/68
3 As per Dims. added	F.L.	N.W.	8-26-68
2 As per Addendum 2	J.R.M.	G.S.C.	7-15-68
1 As per Addendum 1	J.R.M.	G.S.C.	7-15-68

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280
MUNICIPALITY: NEWARK
SECTION: 7D
COUNTY: ESSEX

PIER GEOMETRY & TYPICAL PLANS & ELEVATIONS

PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
ENGINEERS
NEW YORK TRENTON

SCALE: As Shown
DATE: Jan. 1968
SHEET NO. 25 OF ~~132~~ 133

IN CHARGE OF
CHECKED BY

07300 95 133 277

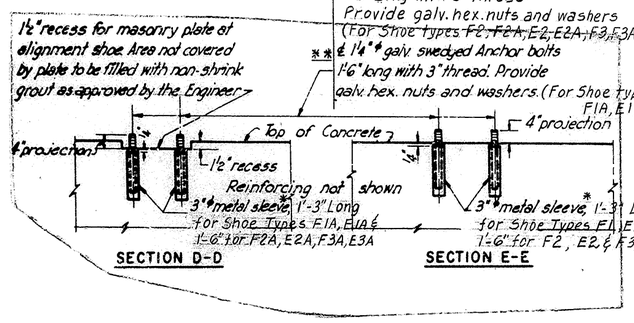
0730-267-7

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-I-280-6(36)60	N.J.	1967	96	~~132~~ 133

STRINGER SKEW ANGLES AND SEAT ELEVATIONS AT PIERS

PIER	STRINGER NO.	E. BOUND ①	②	③	④	⑤	⑥	⑦	⑧	W. BOUND ①	②	③	④	⑤	⑥	⑦	PIER
1A	West Stringer Angle	+63°-35'	+62°-25'	+61°-15'	+60°-11'	—	—	—	—	+23°-08'	+22°-31'	+21°-50'	+21°-05'	+20°-14'	+19°-17'	—	
	East Stringer Angle	+56°-18'	+56°-02'	+55°-45'	—	—	—	—	—	+18°-07'	+17°-46'	+17°-24'	+17°-00'	+16°-35'	+16°-09'	—	
	West Seat Elevation	148.78	149.71	150.42	151.13	—	—	—	—	150.65	151.22	151.78	152.34	152.89	153.43	—	1
	East Seat Elevation	149.10	149.92	150.92	—	—	—	—	—	151.16	151.76	152.32	152.88	153.41	153.96	—	
1B	W. S. A.	—	—	—	—	+59°-13'	+58°-14'	+57°-25'	+56°-38'	—	—	—	—	—	—	—	
	E. S. A.	—	—	—	+55°-27'	+55°-06'	+54°-44'	+54°-19'	—	—	—	—	—	—	—	—	
	W. Seat El.	—	—	—	—	151.79	152.42	153.02	153.58	—	—	—	—	—	—	—	
	E. Seat El.	—	—	—	151.71	152.45	153.15	153.82 Δ 153.66	—	—	—	—	—	—	—	—	
2	W. S. A.	+40°-49'	+40°-34'	+40°-17'	+39°-58'	+39°-38'	+39°-15'	+38°-51'	—	+3°-36'	+3°-15'	+2°-53'	+2°-29'	+2°-04'	+1°-38'	—	
	E. S. A.	+38°-42'	+38°-29'	+38°-14'	+37°-59'	+37°-42'	+37°-23'	—	—	-1°-01'	-1°-10'	-1°-19'	-1°-28'	-1°-37'	-1°-46'	—	
	W. Seat El.	153.77	154.18	154.61	154.98	155.33	155.66	155.97	—	152.84	153.33	153.78	154.24	154.66	155.11	—	2
	E. Seat El.	153.87	154.35	154.81	155.19	155.59	155.99	—	—	153.38	153.86	154.32	154.77	155.22	155.63	—	
3	W. S. A.	+22°-41'	+22°-27'	+22°-13'	+21°-57'	+21°-40'	+21°-22'	—	—	+2°-31'	+2°-22'	+2°-13'	+2°-04'	+1°-55'	+1°-46'	—	
	E. S. A.	+21°-38'	+21°-30'	+21°-21'	+21°-11'	+21°-01'	+20°-49'	—	—	-1°-40'	-1°-41'	-1°-42'	-1°-43'	-1°-44'	-1°-44'	—	
	W. Seat El.	155.14	155.36	155.57	155.73	155.91	156.11	—	—	154.12	154.55	154.99	155.43	155.87	156.31	—	3
	E. Seat El.	155.66	155.88	156.08	156.21	156.45	156.61	—	—	154.64	155.11	155.55	155.99	156.43	156.83	—	
4	W. S. A.	+0°-18'	+0°-09'	0°-00'	-0°-09'	-0°-20'	-0°-31'	—	—	+1°-35'	+1°-34'	+1°-34'	+1°-33'	+1°-32'	+1°-31'	—	
	E. S. A.	+0°-05'	-0°-02'	-0°-09'	-0°-16'	-0°-24'	-0°-31'	—	—	-0°-59'	-0°-59'	-0°-59'	-0°-59'	-0°-59'	-0°-59'	—	
	W. Seat El.	155.83	155.86	155.89	155.92	155.96	155.98	—	—	154.75	155.19	155.59	156.00	156.40	156.77	—	4
	E. Seat El.	156.33	156.36	156.39	156.42	156.45	156.48	—	—	155.29	155.70	156.10	156.50	156.91	157.31	—	
5	W. S. A.	-0°-14'	-0°-21'	-0°-28'	-0°-35'	-0°-42'	-0°-50'	—	—	+0°-50'	+0°-50'	+0°-50'	+0°-50'	+0°-50'	+0°-50'	—	
	E. S. A.	+0°-42'	+0°-27'	+0°-11'	-0°-05'	-0°-22'	-0°-39'	—	—	-0°-52'	-0°-52'	-0°-52'	-0°-52'	-0°-51'	-0°-51'	—	
	W. Seat El.	155.38	155.29	155.18	155.08	154.98	154.88	—	—	153.53	155.30	155.57	155.84	156.11	154.87	—	5
	E. Seat El.	155.81	155.70	155.60	155.49	155.38	155.28	—	—	153.91	154.18	154.44	154.71	154.98	155.24	—	
6	W. S. A.	-14°-26'	-14°-42'	-14°-57'	-15°-13'	-15°-30'	-15°-47'	—	—	-9°-15'	-9°-15'	-9°-14'	-9°-14'	-9°-14'	-9°-14'	—	
	E. S. A.	-11°-17'	-11°-29'	-11°-40'	-11°-51'	-12°-01'	-12°-13'	—	—	-8°-46'	-8°-52'	-8°-57'	-9°-03'	-9°-08'	-9°-14'	—	
	W. Seat El.	151.16	151.16	151.16	151.16	151.16	151.16	—	—	151.19	151.19	151.19	151.19	151.19	151.16	—	6
	E. Seat El.	151.16	151.16	151.16	151.16	151.16	151.16	—	—	151.19	151.19	151.19	151.19	151.19	151.16	—	
7	W. S. A.	-9°-49'	-10°-00'	-10°-11'	-10°-22'	-10°-33'	-10°-44'	—	—	-7°-18'	-7°-23'	-7°-29'	-7°-34'	-7°-40'	-7°-45'	—	
	E. S. A.	-3°-47'	-3°-48'	-3°-49'	-3°-51'	-3°-52'	-3°-53'	—	—	-3°-34'	-3°-38'	-3°-41'	-3°-45'	-3°-48'	-3°-51'	—	
	W. Seat El.	145.70	145.70	145.70	145.65	145.57	145.57	—	—	145.57	145.57	145.57	145.65	145.70	145.70	—	7
	E. Seat El.	145.70	145.70	145.70	145.65	145.57	145.57	—	—	145.57	145.57	145.57	145.65	145.70	145.70	—	
8	W. S. A.	-3°-25'	-3°-26'	-3°-27'	-3°-29'	-3°-30'	-3°-32'	—	—	-3°-13'	-3°-16'	-3°-19'	-3°-23'	-3°-26'	-3°-29'	—	
	E. S. A.	+2°-34'	+2°-43'	+2°-52'	+3°-01'	+3°-11'	+3°-21'	—	—	+2°-47'	+2°-52'	+2°-58'	+3°-04'	+3°-11'	+3°-17'	—	
	W. Seat El.	140.15	139.95	139.54	139.12	138.71	138.07	—	—	140.91	140.70	140.28	139.85	139.43	138.78	—	8
	E. Seat El.	141.37	140.95	140.54	140.12	139.71	138.88	—	—	141.70	141.53	141.11	140.69	140.26	139.83	—	

For Stringer Numbers see Sheet No. B8.

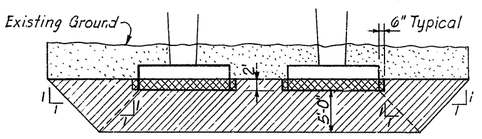


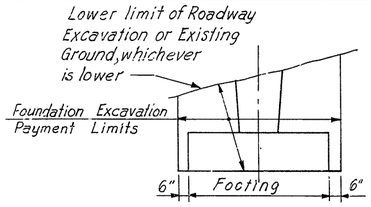
*All Piers where Skew prevents proper placement of Reinforcement because of Anchor Bolts, the Anchor Bolts shall be placed by using a Template.

**Where span exceeds 100 ft. use 1½" bolts.

TABLE OF END DIAPHRAGM TYPES AND CONNECTIONS

SPAN	SUPPORT WEST / EAST	EASTBOUND DIAPHRAGM TYPE	EASTBOUND CONNECTION TYPE	WESTBOUND DIAPHRAGM TYPE	WESTBOUND CONNECTION TYPE	REMARKS
1	West Abt. / Pier 1	D3 / D3	C5 / C5	D2 / D1	C4 / C3	For Details of End Diaphragms and Connections see Sheet No. B15
2	Pier 1 / Pier 2	D3 / D1	C5 / C4	D1 / D1	C2 & C3 / C1	
3	Pier 2 / Pier 3	D2 / D1	C4 / C3	D1 / D1	C1 / C1	
4	Pier 3 / Pier 4	D1 / D1	C3 / C1	D1 / D1	C1 / C1	
5	Pier 4 / Pier 5	D1 / D1	C1 / C1	D1 / D1	C1 / C1	
6	Pier 5 / Pier 6	D1 / D1	C1 / C2	D1 / D1	C1 / C2	
7	Pier 6 / Pier 7	D1 / D1	C2 / C2	D1 / D1	C2 / C2	
8	Pier 7 / Pier 8	D1 / D1	C1 / C1	D1 / D1	C1 / C1	





Foundation Excavation

Bridge Foundation Borrow Excavation

Roadway Excavation Unclassified Material

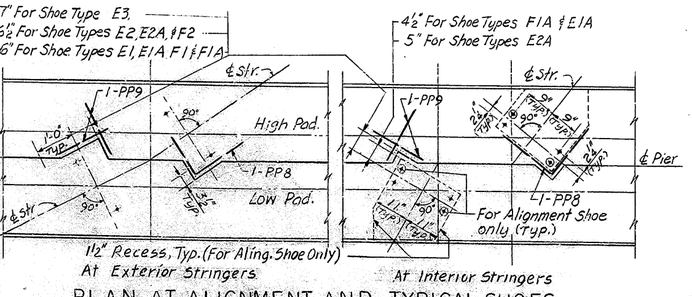
Not Bridge Items

FOUNDATION EXCAVATION PAYMENT LIMITS

For Pier #4EB

FOUNDATION EXCAVATION PAYMENT LIMITS

(Applicable to all pier footings except pier footing #4 E.B.



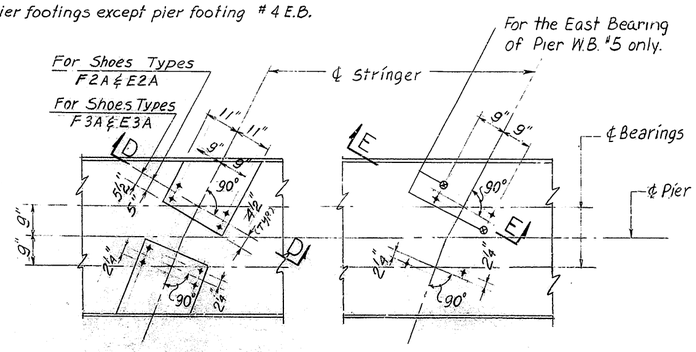
PLAN AT ALIGNMENT AND TYPICAL SHOES

For Piers #1A, #1B & #2 E.B. only, excluding Shoes under Stringers S27C & S29B, Pier #1 E.B. and Stringers S29B & S33, Pier #2 E.B.

(See Plan of Special Anchor Bolt & Bearing Layout on this sheet.)

ANCHOR BOLT DETAILS

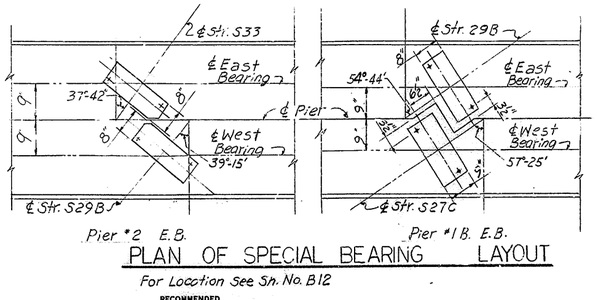
(Bearing Plates not shown)



PLAN AT ALIGNMENT SHOE PLAN AT TYPICAL SHOE

For all piers except #1A, #1B & #2 E.B. and #6 & #7

For Anchor Bolt Details at Piers #6 & 7 see Sh. No B11, at piers #1A, #1B & #2EB see plan on this sheet.



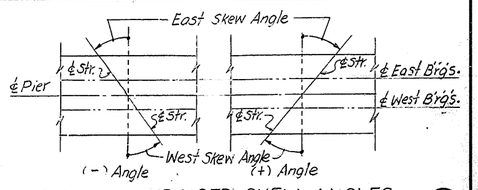
PLAN OF SPECIAL BEARING LAYOUT

For Location See Sh. No. B12

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY L. L. Bykman

APPROVED

DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT



TYPICAL STRINGER SKEW ANGLES

(Not to scale)

B9 B-45

REVISION	BY	CKD.	DATE
B.H. ELEV. REVISION	F.L.	J.K.	11-13-68

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280 SECTION: 7D
MUNICIPALITY: NEWARK COUNTY: ESSEX

PIER GEOMETRY AND DIAPHRAGM SCHEDULE

PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
ENGINEERS
NEW YORK TRENTON

SCALE: ½"=1'-0" & as shown
DATE: Jan. 1968
SHEET NO. 96 OF 133

0730 096 133 277

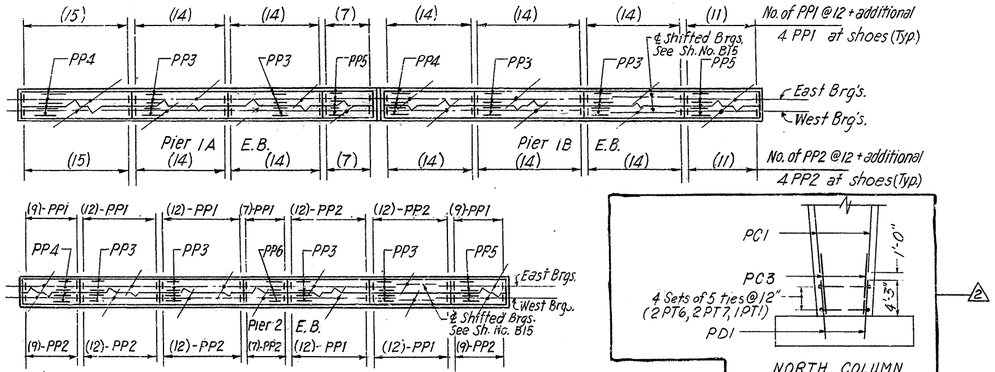
0730 270

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOT. SHEETS
1	N.J.-I-280-6(36)60	N.J.	1967	97	+33

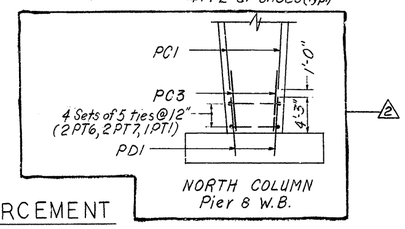
133

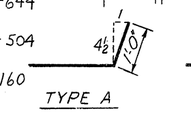
PIER REINFORCEMENT BAR SCHEDULE

LOCATION MK	SIZE	LENGTH (typ. except as noted in Remarks)	TYPE	REMARKS ((1)(2) etc. indicates length of bar for particular pier)	NUMBER OF BARS PER PIER E.B. PIER 1A	PIER 1B	PIER 2	PIER 3	PIER 4	PIER 5	PIER 8	W.B. PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 8	TOTAL NUMBER OF BARS *See Remarks
PB1	11	25'-8"	A	(1) 26'-5" (2) 27'-0" (3) 28'-4" (4) 29'-7" (5) 35'-6"	8(2)	8(3)	8(5)	8(4)	8(2)	8(1)	8	8(3)	8(1)	8	8	8	8	96
PB2	11	21'-8"	STR	(1) 25'-1" (2) 23'-0" (3) 24'-4" (4) 25'-7" (5) 31'-6"														24
PB3	10	28'-10"	"		20(3)	20(3)	40(5)	20(6)	24(2)	28(1)	2	16(5)	16(2)	16	16	28	2	
PB3	10	28'-10"	"	(1) 31'-0" (2) 32'-0" (3) 29'-4" (4) 29'-10"	2(1)	2(2)	–	–	–	–	–	–	2(2)	2(3)	2(3)	–	–	10
PB3	11	28'-10"	"	(1) 31'-0" (2) 32'-4" (3) 39'-6" (4) 33'-0"	–	–	4(2)	2(4)	2(1)	2(1)	–	–	2(2)	–	–	2	–	14
PB4	7	9'-0"	B	(1) 10'-0" (2) 11'-0" (3) 14'-3"	8(1)	8(2)	8(3)	8(2)	8(1)	8(1)	8	8(2)	8(1)	8	8	8	8	96
PB5	6	23'-6"	STR.	(1) 24'-10" (2) 27'-0" (3) 33'-2"	8(1)	8(2)	8(3)	8(2)	8(1)	8(1)	8	8(2)	8	8	8	8	8	96
PB6	6	7'-8"	C	a = b = 2'-0"; c = 3'-8"	8	8	8	8	8	8	8	8	8	8	8	8	8	96
PB7	6	4'-5"	D		8	8	8	8	8	8	8	8	8	8	8	8	8	96
PB8	6	20'-6"	STR.	(1) 22'-6" (2) 27'-0"	4	4(1)	4(2)	4(1)	4	4	4	4(1)	4	4	4	4	4	48
PB9	10	15'-0"	"		–	–	–	–	–	–	6	–	–	–	–	–	6	6
PB9	10	15'-0"	"		4	4	–	–	–	–		–	4	4	4	–	–	20
PB9	11	15'-0"	"	(1) 25'-0"	–	–	6(1)	4	4	4	–	4	–	–	–	4	–	26
PS1	6	11'-0"/16'-10"	E	b = 2'-3" Vary h every h = 2'-8/5-7" four bars by ~~(1) Ah = 3½"~~ (2) Ah = 2⅞"; (3) Ah = 2¾"; (4) Ah = 2⅝"; (5) Ah = 2"; (6) Ah = 3¼"	52(2)	56(3)	76(5)	60(4)	52(2)	52(2)	44(1)	56(3)	48(6)	48(6)	48(6)	48(6)	48(6)	644
PS2	6	17'-0"	E	h = 5'-8"; b = 2'-3"	42	44	58	46	40	40	36	44	38	38	38	38	38	504
PC1	10	25'-10"	STR.	(1) 14'-2" (2) 17'-10" (3) 22'-10" ~~(4) 27'-8"~~ (5) 36'-0" (6) 26'-4"	20(1)	20(1)	–	16(3)	20	–	20(2)	16(2)	16	16	16(6)	–	20(3)	160
PC1	11	20'-0"	"	(1) 28'-7" (2) 31'-2"		–	20		–	20(2)	–	–	–	–	–	20(1)	–	60 *
PC2	10	26'-7"	STR.	(1) 15'-9" (2) 19'-5" (3) 22'-8" (4) 27'-2" (5) 35'-3" (6) 27'-1"	20(1)	20(1)	–	16(3)	20	–	20(2)	16(2)	16	16	16(6)	–	20(4)	160 *
PC2	11	21'-0"	"	(1) 29'-2" (2) 30'-7"	–	–	20	–	–	20(2)	–	–	–	–	–	20(1)	–	60 *
PC4	10	10'-0"	"								(2)						(2)	20
PD1	10	8'-0"	STR.		40	40	–	32	40	–	40	32	32	32	32	–	40	320
PD1	11	8'-6"	"		–	–	40	–	–	40	–	–	–	–	–	40	–	120
PC3	10	9'-0"	STR.														(20)	20
PT1	4	11'-4"	E	h = 3'-8" b = 1'-7"	21	22	33	38	44	54	41	30	44	42	45	50	46	473
PT2	4	5'-2"	F	∝ = 63° a = 1'-10" b = 1'-6"	40	40	40	40	40	40	40	40	40	40	40	40	40	480
PT3	4	5'-3"	F	∝ = 27° a = 1'-10" b = 1'-7"	40	40	40	40	40	40	40	40	40	40	40	40	40	480
PT4	4	4'-10"	F	∝ = 58° a = 1'-8" b = 1'-6"	2	4	26	36	40	40	28	20	40	40	40	40	28	368
PT5	4	4'-11"	F	∝ = 32° a = 1'-8" b = 1'-7"	2	4	26	36	40	40	28	20	40	40	40	40	28	368
PT6	4	4'-4"	F	∝ = 50° a = 1'-5" b = 1'-6"	–	–	–	–	8	28	14	–	8	4	10	20	20	98
PT7	4	4'-5"	F	∝ = 40° a = 1'-5" b = 1'-7"	–	–	–	–	8	28	14	–	8	4	10	20	20	98
CF1	8	14'-6"	STR.		64	64	–	–	–	–	–	64	64	64	–	–		60
PF1	9	14'-6"	"															384
PF1	10	14'-6"	"		–	–						–	–	–				388
PP1	5	4'-10", 6'-10" (1)	C	a = b = 1'-8" c = 1'-6" (1) a = b = 2'-8"	62	69	97	80	74	74	71	80	74	74	74	74	71	903
PP2	5	3'-5"	C	a = 1'-3" c = 2'-2" b = 0	66	69	101	80	74	74	71	80	74	74	74	74	71	911
PP3	5	7'-9"	STR	(1) 13'-1" (2) 10'-5" (3) 8'-3" (4) 9'-2" (5) 7'-6" ~~(6) 7'-2"~~ (7) 8'-10"	8(1)	8(1)	16(2)	16(4)	16(3)	16(3)	16(6)	16(7)	16	16	16	16	16(5)	176
PP4	5	5'-11"	"	(1) 14'-2" (2) 12'-8" (3) 7'-8" (4) 7'-0" (5) 6'-3 ⅜" (6) 6'-9"	4(1)	4(2)	4(3)	4(4)	4(5)	4(5)	4	4(6)	4(6)	4	4	4	4	48
PP5	5	5'-11"	"	(1) 6'-6" (2) 10'-0" (3) 7'-6" (4) 7'-0" (5) 6'-3 ⅜" ~~(6) 7'-3"~~	4(1)	4(2)	4(3)	4(4)	4(5)	4(5)	4(6)	4(5)	4(6)	4	4	4	4(3)	48
PP6	5	5'-6"	"	(1) 4'-4"	–	–	4	–	–	–		–	–	–	–	–		4
PP7	5	13'-1"	"		–	–	–	–	–	–		–	–	–	–	–		
PP8	5	3'-0"	C	For location See Sheet No. B9	3	4	6	6	6	6	6	6	6	6	6	6	6	67
PP9	5	1'-6"	STR	For location See Sheet No. B9	8	8	12	12	12	12	12	12	12	12	12	12	12	136

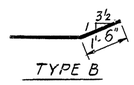


BEARING SEAT REINFORCEMENT
AT PIER 1A & 1B (E.B.) PIER 2 (E.B.)

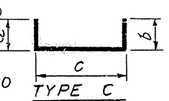




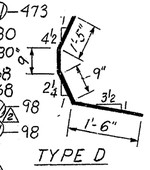
TYPE A



TYPE B



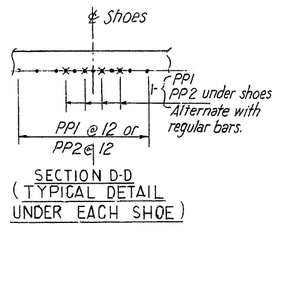
TYPE C



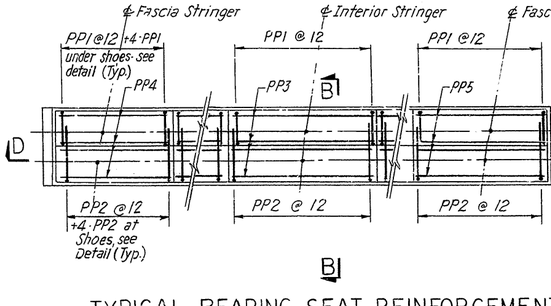
TYPE D

TYPE E

TYPE F



SECTION D-D
(TYPICAL DETAIL UNDER EACH SHOE)



B1

TYPICAL BEARING SEAT REINFORCEMENT

Not to Scale

Note: Step bearing seats midway between ℄ of Stringers, except Piers 1A; 1B; & 2 E.B. as shown on Sh. No. 9

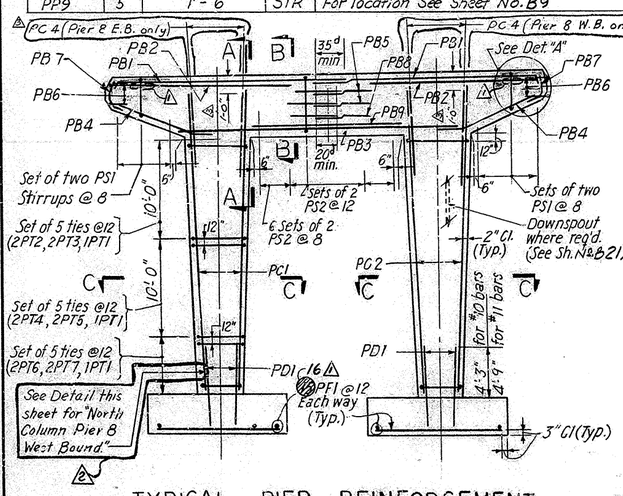
POSITIVE CAP REINFORCEMENT AT SECTION B-B

PIER		"A" BARS 2-PB3 2-PB9	"B" BARS (PB9)	TOTAL NO. OF BARS
2, 3, 4	W.B.	4 #10	2 #10	6 #10
1a, 1b	E.B.			
1, 5	W.B.	4 #11	2 #11	6 #11
3, 4, 5	E.B.			
8	W.B.	4 #10	4 #10	8 #10
4	E.B.	4 #11	4 #11	8 #11
2	E.B.	4 #11	4 #11	10 #11

NEGATIVE CAP REINFORCEMENT AT SECTION A-A

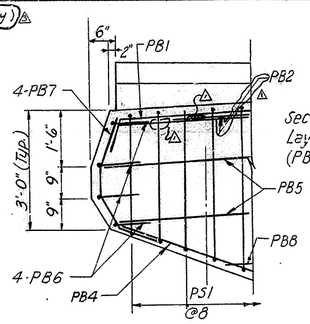
PIER		COMBINATION OF BARS 1ST LAYER 4-PB1 5-PB2	2ND LAYER (PB2) 1	2	3	4	TOTAL OF BARS
1, 2, 3, 4	W.B.	9 #11	2 #11	–		–	12 #11
1a, 1b, 3	E.B.	9 #11	2 #11	2 #11			16 #11
1, 5	W.B.				1 #11		
4	E.B.	9 #11	2 #11	2 #11	1 #11		16 #11
8	W.B.	9 #11	2 #11	4 #11	1 #11	4 #11	16 #11
5	W.B.	9 #11	2 #11	2 #11	1 #11	4 #11	15 #11

‡ See Sect. B-B



TYPICAL PIER REINFORCEMENT

Not to Scale (Except pier EB 8) 4

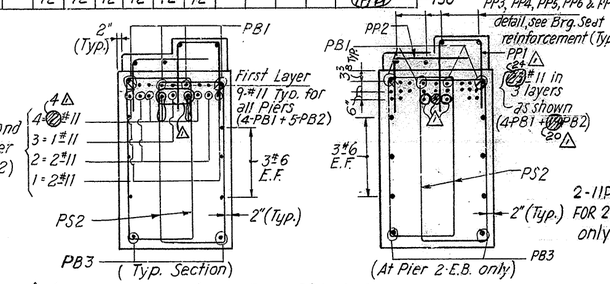


DETAIL "A"

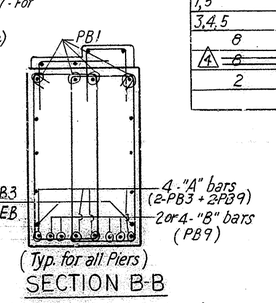
½" = 1'-0"

4 (Except pier EB 8)

Reinforcing Bars to clear anchor bolts. Spacing may be varied but not to be less than required by specifications.

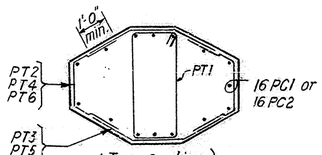


4 (Except pier EB 8) SECTION A-A

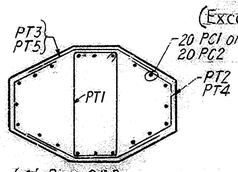


SECTION B-B

(Except pier EB 8) 4



4 (Except pier EB 8) SECTION C-C



(At Piers 2 E.B. 1A, 1B E.B. ~~5 E.B.~~ & 8 W.B. 4 5 E.B., 5 W.B., 4 E.B.)

MARKS

P.B. Cap Beam
P.C. Column
P.F. Footing
P.D. Dowel
P.S. Stirrup
P.T. Column Tie
P.P. Pedestal

NOTES:

1 - ~~For footing incorporated with existing wall of Pier #8 E.B. See Sheet No. B11~~ 4

2 - For the supporting columns & footings of Box Girders at Piers #6 & #7 See Sheet No. B11

3 - Work this sheet together with Sheets Nos. B8 & B9

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY W. T. [illegible]

APPROVED

DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

REVISION	BY	CKD.	DATE
4 Reinf. Revision for Pier EB 8	S.A.	C.Y.	2-24-69
3 Add Reinf.	F.C. RDS.	J.K. JHO.	1-14-69
2 Add Reinf.	F.L. R.D.	J.K. JHO.	11-18-68
1 Reinf. Changes	B.E. R.D.	J.K. JHO.	8-22-68

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280
MUNICIPALITY: NEWARK
SECTION: 7D
COUNTY: ESSEX

PIER REINFORCEMENT DETAILS AND SCHEDULE

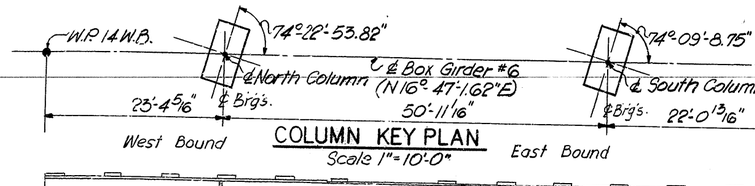
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS ENGINEERS
NEW YORK TRENTON

SCALE: As Shown
DATE: Jan. 1968
SHEET NO. 97 OF +33

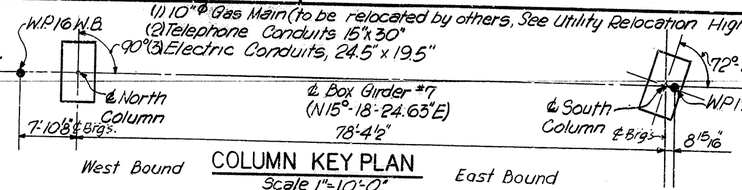
MADE BY HG
CHECKED BY C Yang
IN CHARGE OF L. Kashyap

0730 097 133 277

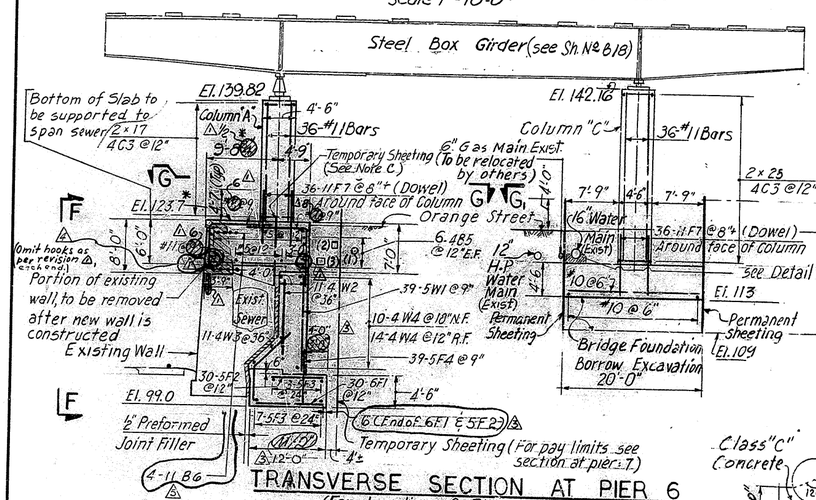
FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-I-280-6(36)60	N.J.	1967	98	132
					133

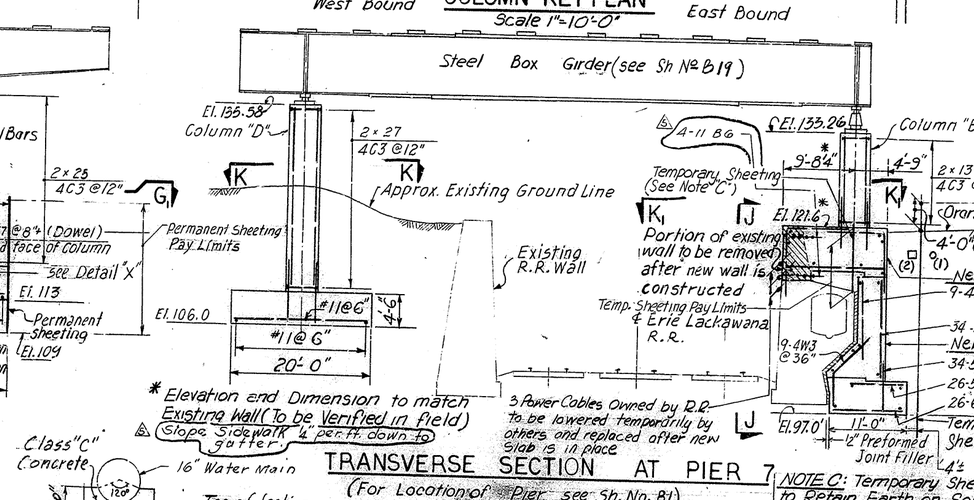


COLUMN KEY PLAN
Scale 1"=10'-0"



COLUMN KEY PLAN
Scale 1"=10'-0"



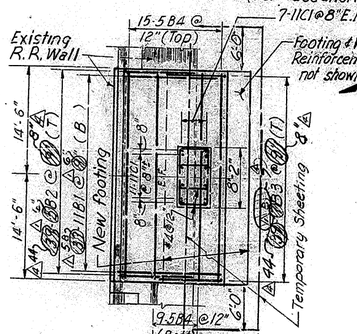


NOTE C: Temporary Sheeting to Retain Earth on Sewer until new wall is Constructed Pay Limits are as shown at Pier 7

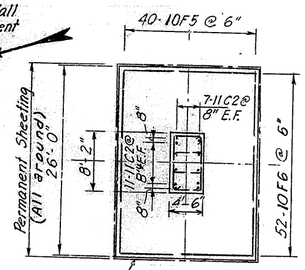
TYPE A · TYPE B · TYPE C · TYPE D

BAR SCHEDULE

PIER NO. 6 MK	LENGTH	TYPE	REMARKS	TOTAL	PIER NO. 7 MK	LENGTH	TYPE	REMARKS	TOTA
6F1	10'-6"	STR.		30	6F1	10'-6"	STR.		26
5F2	5'-0"	"		30	5F2	5'-0"	"		26
5F3	28'-6"	"		10	5F3	24'-6"	"		10
5F4	6'-10"	"		39	5F4	6'-10"	"		34
10F5	25'-6"	"		40	11F5	28'-6"	"		40
10F6	19'-6"	"		52	11F6	19'-6"	"		58
11F7	8'-10"	"		72	11F7	8'-10"	"		72
5W1	13'-0"	STR.		39	5W1	12'-10"	STR.		34
4W2	10'-0"	"		11	4W2	10'-0"	"		9
4W3	12'-3"	A	a=6'-8"; b=5'-7"; C=4'-9"	11	4W3	12'-3"	A	a=6'-8"; b=5'-7"; C=4'-9"	9
4W4	28'-6"	STR.		24	4W4	24'-6"	STR.		24
5W5	30'-10"	D	a=8'-8"; b=13'-6"; C=8'-8"	9				Pier 8 (E.B.) Wall Fig. Reinf.	
6W6	22'-9"	Str.		22					51
11B1	14'-3"	STR.		58 (39)	11B1	14'-3"	STR.		(34)
6B2	16'-11"	B	a=7'-11"; b=9'-0"	44 (39)	5B2	16'-11"	B	a=7'-11"; b=9'-0"	38 (39)
7B3	16'-5"	B	a=7'-11"; b=8'-6"	44 (39)	7B3	16'-5"	B	a=7'-11"; b=8'-6"	38 (39)
5B4	28'-6"	STR.		24	5B4	24'-6"	STR.		24
4B5	28'-6"	"		12	4B5	24'-6"	"		12
11B6	28'-6"	"		(8)	11B6	24'-6"	"		(8)
11C1	15'-11	STR.		36	11C1	11'-5"	STR.		36
11C2	24'-5"	"		36	11C2	24'-10"	"		36
4C3	19'-4"	C	a=4'-0"; b=5'-2"; C=6"	84	4C3	19'-4"	C	a=4'-0"; b=5'-2"; C=6"	80

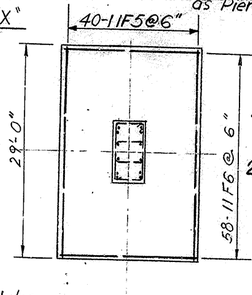


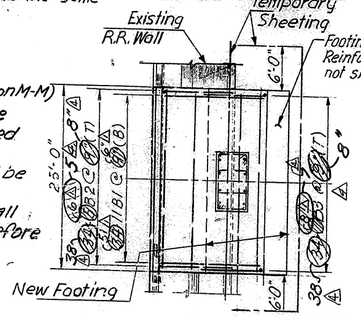
SECTION G-G



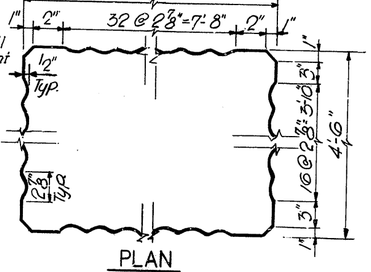
Permanent Sheeting-(5.4 in³ Section Modulus and approx. 22 lbs/sq. Ft) Shoring & Bracing to be provided to approval of Engineer. Bottom of Sheet Piling to be 4'-0" below bottom of footing and top to be cut off 2'-0" below final grade.

SECTION K-K

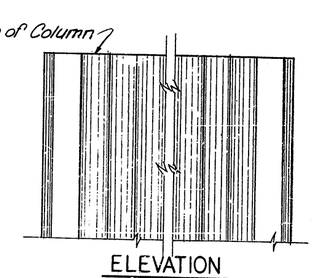




SECTION K1-K1

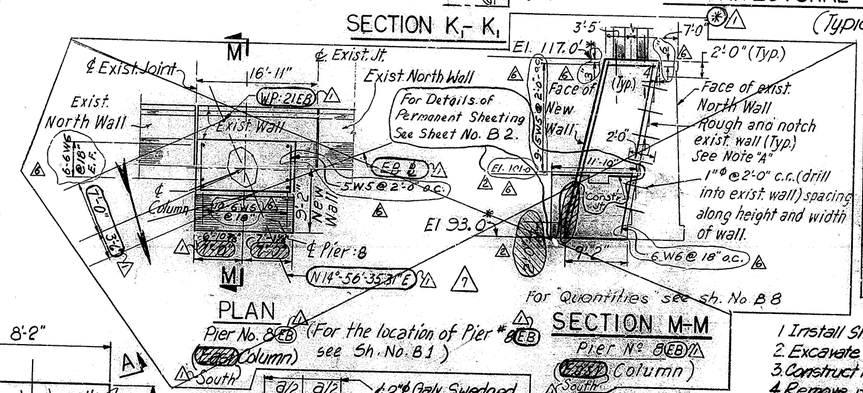


PLAN

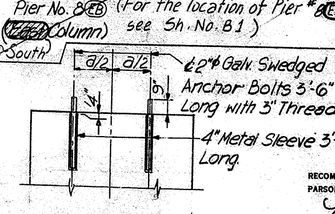


ELEVATION

ARCHITECTURAL TREATMENT OF COLUMNS AT PIERS 6 & 7
(Typical On All Exposed Surfaces of Columns)
Scale 1½"=1'-0"



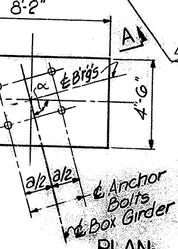
PLAN
Pier No. 8 E.B. (For the location of Pier # 8 E.B. Column see Sh. No. B1)



SECTION A-A

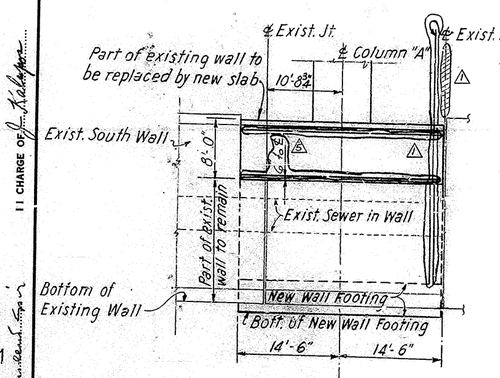
SECTION M-M
Pier No. 8 E.B. (Column)

	α	a	b
Pier #6 Exp. Bearing	74°-22'-53.80"	1'-0"	2'-2"
Pier #6 Fixed Bearing	74°-09'-8.75"	3'-4"	2'-2"
Pier #7 Exp. Bearing	72°-26'-46.7"	3'-4"	2'-2"
Pier #7 Fixed Bearing	90°-00'-00"	3'-4"	2'-2"

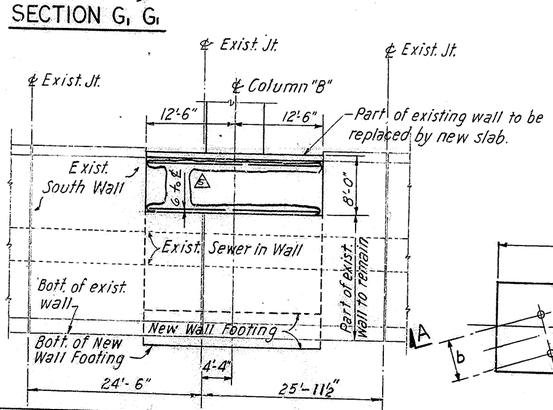


PLAN

ANCHOR BOLT DETAILS AT TOP OF COLUMNS
Scale: 4"=1'-0"



VIEW F-F
(At Column "A")



VIEW J-J
(At Column "B")

SUMMARY PIER # 8			
Item	Plan	Adjusted Plan #	As Built
Temporary Sheeting	0 S.F.	300 S.F.	300 S.F.
Removal of Conc. Masonry (R.R. Wall South)	0 C.Y.	12.58 C.Y.	12.58 C.Y.

Note: See sheet 133 of 133 for Pier # 8 Revision.

SUMMARY OF QUANTITIES - PIERS

ITEM	PLAN QUANTITIES PIER #6 W.B.	PIER #6 E.B.	PIER #7 W.B.	PIER #7 E.B.	AS-BUILT QU. PIER #6 W.B.	PIER #6 E.B.	W.B.
Foundation Excavation	442 C.Y.	244 C.Y.	444 C.Y.	398 C.Y.	368.58	280.61	343
Class "B" concrete (sub)	195 C.Y.	34 C.Y.	35 C.Y.	165 C.Y.	195.28	33.57	34
Class "C" concrete	56 C.Y.	87 C.Y.	97 C.Y.	48 C.Y.	60.42	86.67	96
Reinforcement Steel	13,470 C.Y.	15,810 Lbs.	19,260 Lbs.	11,410 Lbs.	14,231	18,200	20
Permanent Sheeting	—	1900 S.F.	—	—	—	1784.8	—
Temporary Sheeting	2065 S.F.	—	—	1849 S.F.	2011.58	—	—
Removal of Concrete Masonry (R.R. Wall South)	28 C.Y.	—	—	24 C.Y.	32.37	—	—

CONSTRUCTION SEQUENCE (Piers #6 & #7)
1. Install Sheeting along Orange Street limit indicated thus.
2. Excavate
3. Construct New Column and Footing
4. Remove portion of Existing Wall to
5. Construct New Slab, as shown in transverse section at Piers #6 & #7 (611 B-45)
6. Construct Columns "A" & "B"

REVISION	BY	CKD.	DATE
Reinf. of Mask.	BC	RD	8-22-68
Section M-M Revised	BC	RD	JK 11-15-68
Reinf. Pier 8 & Footings	BC	JRS	JK 1-14-69
Pier No. 8	BC	JRS	MC RD 1-28-69
Section M-M	S.A.		J.K. 2-24-69

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY: W. T. Tyldesley
APPROVED
DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280 MUNICIPALITY: NEWARK
SECTION: 7D COUNTY: ESSEX

PIERS NOS 6 & 7 & 8
COLUMN AND WALL DETAILS

PARSONS, BRINCKERHOFF, QUADE & DOUGLAS ENGINEERS
NEW YORK TRENTON
SCALE: 3/32"=1'-0" & as shown
DATE: Jan. 1968
SHEET NO. 98 OF 133

MADE BY ..... CHECKED BY ..... IN CHARGE OF .....

OT 80276-7

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-I-280-6(36)60	N.J.	1967	99	~~132~~ 133

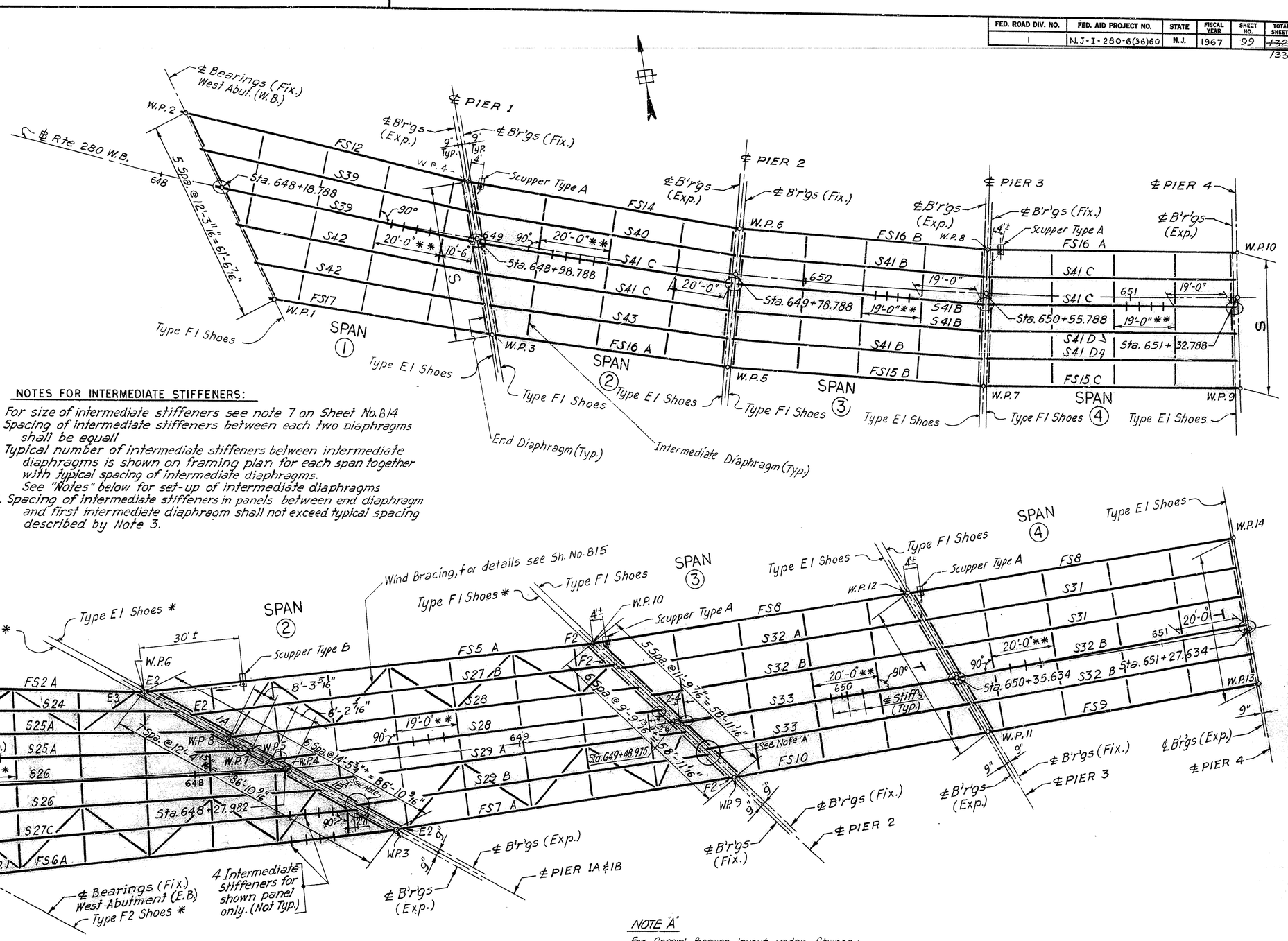
TABLE OF WORK POINT STATIONS & OFFSETS

WEST BOUND

W.P.	STATION	OFFSET
1	647+32.509	26.820 R
2	646+21.860	25.170 L
3	648+60.205	20.823 R
4	648+29.045	0.673 R
5	648+18.511	5.928 L
6	647+86.213	25.171 L
7&8	See Framing Plan for Location	
9	649+64.036	18.674 R
10	649+26.712	27.000 L
11	650+42.612	17.424 R
12	650+24.757	27.000 L
13	651+27.634	16.300 R
14	651+27.634	27.000 L
15	652+27.634	15.257 R
16	652+27.634	27.000 L
17	653+59.625	12.336 R
18	653+68.992	27.000 L
19	655+09.640	10.500 R
20	655+14.390	27.000 L
21	656+55.958	10.500 R
22	656+55.979	27.000 L

WEST BOUND

W.P.	STATION	OFFSET
1	648+39.961	27.000 R
2	648+01.707	21.164 L
3	649+07.458	27.000 R
4	648+93.290	16.508 L
5	649+78.788	27.000 R
6	649+78.788	14.097 L
7	650+55.788	27.000 R
8	650+55.788	13.091 L
9	651+32.788	27.000 R
10	651+32.788	13.000 L
11	652+09.788	27.000 R
12	652+09.788	13.000 L
13	653+70.466	27.000 R
14	653+77.174	13.000 L
15	655+17.684	26.000 R
16	655+21.883	13.000 L
17	656+65.000	25.500 R
18	656+65.000	13.000 L



NOTES FOR INTERMEDIATE STIFFENERS:

1. For size of intermediate stiffeners see note 7 on Sheet No. B14
2. Spacing of intermediate stiffeners between each two diaphragms shall be equall
3. Typical number of intermediate stiffeners between intermediate diaphragms is shown on framing plan for each span together with typical spacing of intermediate diaphragms. See "Notes" below for set-up of intermediate diaphragms
4. Spacing of intermediate stiffeners in panels between end diaphragm and first intermediate diaphragm shall not exceed typical spacing described by Note 3.

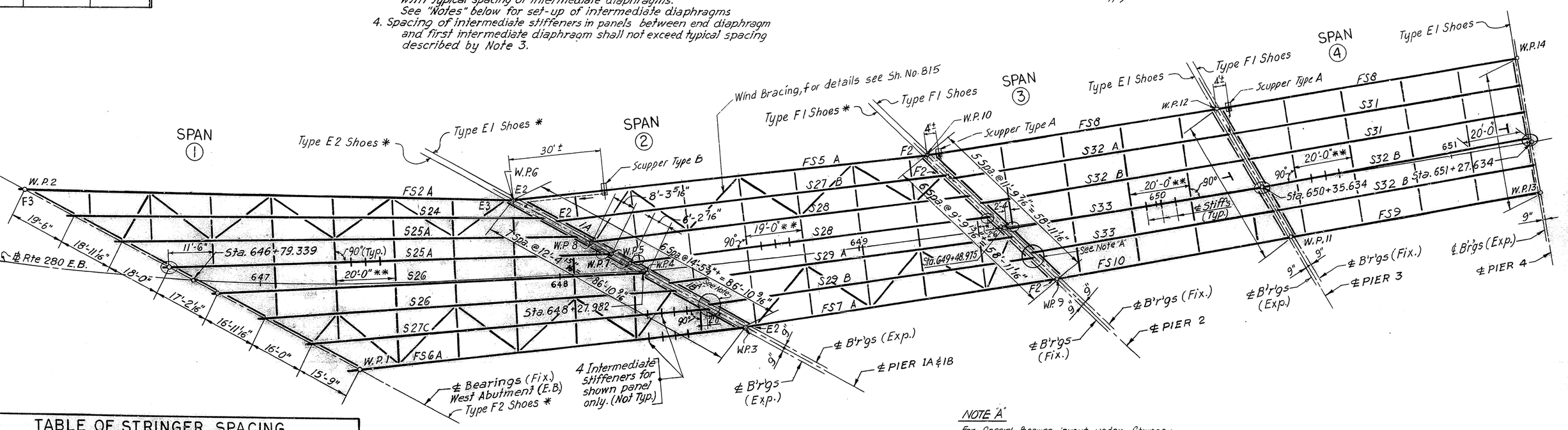


TABLE OF STRINGER SPACING ALONG ℄ OF PIERS

WEST BOUND

R	"T"	PIER	"S"
1	See Framing Plan	1	5 Spa. @ 9'-1 7/8" = 45'-9 5/16"
2	" " "	2	5 Spa. @ 8'-2 5/8" = 41'-1 3/16"
3	5 Spa. @ 9'-6 7/8" = 47'-10 7/16"	3	5 Spa. @ 8'-0 3/16" = 40'-1 1/16"
4	5 Spa. @ 8'-7 15/16" = 43'-3 5/8"	4	5 Spa. @ 8'-0" = 40'-0"
5	5 Spa. @ 8'-5 7/16" = 42'-3 1/16"	5	5 Spa. @ 8'-0" = 40'-0"
6	5 Spa. @ 8'-1 1/16" = 40'-5 5/16"	6	5 Spa. @ 8'-1 5/16" = 40'-6 1/16"
7	5 Spa. @ 7'-6 3/4" = 37'-9 5/8"	7	5 Spa. @ 7'-10 3/8" = 39'-2 1/16"
8	5 Spa. @ 7'-6" = 37'-6"	8	5 Spa. @ 7'-8 3/8" = 38'-6"

NOTES:

* Except as indicated
◯ Indicates Alignment Shoes
— All intermediate diaphragms are set perpendicular to the Stringer with Alignment Shoes, except where shown. For Inter. Diaph. details see Sh. No. B15
** Dimension shown is typical for span.
— For types and connections of End Diaphragms see Table Sheet B.9 ℄ for Details see Sheet No. B15

NOTE "A"

For Special Bearing layout under Stringer S27C, S29B at Pier EB-#1B and under Stringers S29B, S33 at Pier EB-#2 see Sheet No. B9.

B12
B45

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY .....

APPROVED
.....
DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

REVISION	BY	CKD.	DATE

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280 SECTION: 7D
MUNICIPALITY: NEWARK COUNTY: ESSEX

FRAMING PLAN PART I

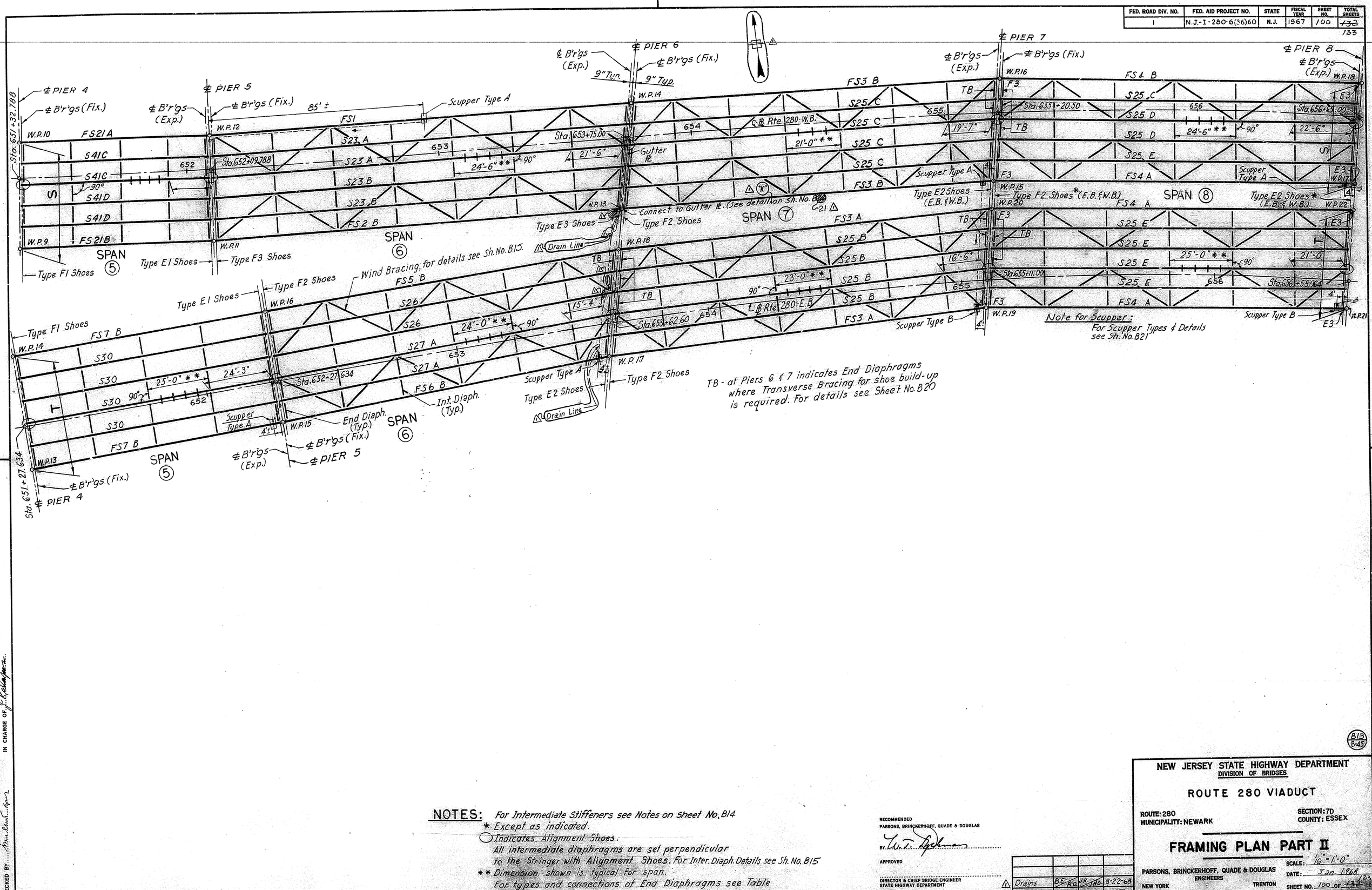
FARSONS, BRINCKERHOFF, QUADE & DOUGLAS ENGINEERS
NEW YORK TRENTON

SCALE: 1/16" = 1'-0"
DATE: Jan. 1968
SHEET NO. 99 OF 133

0730 099 133 277

0730-276-7

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-1-280-6(36)60	N.J.	1967	100	~~132~~ 133



NOTES: For Intermediate Stiffeners see Notes on Sheet No. B14
* Except as indicated.
○ Indicates Alignment Shoes.
All intermediate diaphragms are set perpendicular to the Stringer with Alignment Shoes. For Inter. Diaph. Details see Sh. No. B15
** Dimension shown is typical for span.
For types and connections of End Diaphragms see Table Sheet No. B9 and for Details see Sheet No. B15

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY T. T. Fickman

APPROVED

DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

REVISION	BY	CKD.	DATE
⚠ Drains	BE RD	JK JWD	8-22-68

MADE BY ... CHECKED BY ... IN CHARGE OF J. Kalayjian

B13
B-45

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280
MUNICIPALITY: NEWARK
SECTION: 7D
COUNTY: ESSEX

FRAMING PLAN PART II

PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
ENGINEERS
NEW YORK TRENTON

SCALE: 1/8" = 1'-0"
DATE: Jan. 1968
SHEET NO. 100 OF ~~132~~ 133

0730 100 133 277

0730276-7

✳ Where More Than One Stringer is Noted See This Sheet For Deflection and Cambers

FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.J.-I-280-6(36)60	N.J.	1967	101	~~132~~ 133

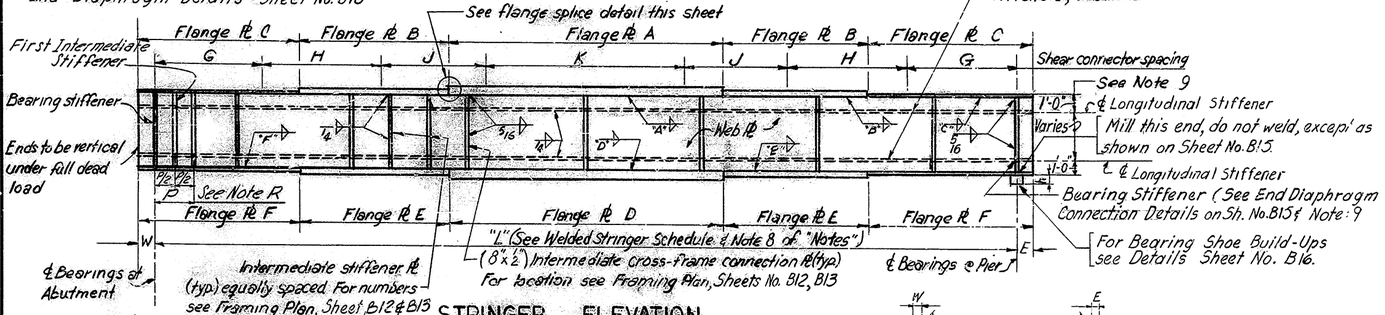
STRINGER SCHEDULE

MARK ✳	HORIZ. DESIGN LENGTH "L"	⚠ W	⚠ E	SECTION: WEB PLATE	TOP FLANGE PLATE A: SIZE	A: WELD "A"	A: LENGTH	B: SIZE	B: WELD "B"	B: LENGTH	C: SIZE	C: WELD "C"	C: LENGTH	BOTTOM FLANGE PLATE D: SIZE	D: WELD "D"	D: LENGTH	E: SIZE	E: WELD "E"	E: LENGTH	F: SIZE	F: WELD "F"	F: LENGTH	BEARING STIFFENER THICKNESS	D.L. DEFL. ST'L	D.L. DEFL. CONC	V.C. CAMBER	TOTAL CAMBER	TYPE "A" SHEAR CONNECTOR SPACING G	H	J	K
																												SPACING	SPACING	SPACING	SPACING
FS1	166.0'			66"×7/16"	24"×2 1/4"	1/2"	70'-0"	24"×1 3/4"	3/8"	25'0"	24"×1"	5/16"	Varies	24"×2 1/4"	1/2"	76'-0"	24"×2 1/4"	3/8"	30'-0"	24"×1"	5/16"	Varies	1"	2 1/8	4 5/8"	4 1/8"	10 7/8"	12@17" = 17'-0"	10@20" = 16'-8"	24" Max. Spacing	
FS2(A,B)	159.7'				24"×2 1/8"	3/8"	82'-0"	24"×1 1/2"	5/16"	15'-0"	24"×1"	5/16"	Varies	24"×2 3/4"	1/2"	86'-0"	24"×2"	3/8"	20'-0"	24"×1"	5/16"	Varies	1"	*	*	*	*	13@16" = 17'-4"	10@20" = 16'-8"		
FS3(A,B)	147.5'				24"×1 5/8"	3/8"	88'-0"	24"×1"	5/16"	Varies	—	—	—	24"×2 1/4"	3/8"	68'-0"	24"×1 3/4"	3/8"	20'-0"	24"×1"	5/16"	Varies	1"	*	*	*	*	11@17" = 15'-7"	5@20" = 8'-4"		
FS4(A,B)	143.2'				24"×1 3/8"	3/8"	88'-0"	24"×1"	5/16"	Varies	—	—	—	24"×2 1/4"	3/8"	70'-0"	24"×1 3/4"	3/8"	18'-0"	24"×1"	5/16"	Varies	1"	*	*	*	*	11@17" = 15'-7"			
FS5(A,B)	140.7'				20"×1 5/8"	3/8"	88'-0"	20"×7/8"	5/16"	Varies	—	—	—	24"×1 7/8"	3/8"	96'-0"	24"×1"	5/16"	Varies	—	—	—	1"	*	*	*	*	11@17" = 15'-7"			
FS6(A,B)	130.1'				20"×1 1/4"	5/16"	F.L.	—	—	—	—	—	—	24"×1 5/8"	3/8"	80'-0"	24"×1"	5/16"	Varies	—	—	—	1"	*	*	*	*	10@17" = 14'-2"			
FS7(A,B)	102.7'				16"×3/4"	1/4"		—	—	—	—	—	—	18"×1 3/8"	5/16"	68'-0"	18" 3/4"	1/4"	Varies	—	—	—	1" FS7A 3/4" FS7B	*	*	*	*	10@16" = 13'-4"	5@20" = 8'-4"		
FS8	101.0'					1/4"		—	—	—	—	—	—	18"×1 3/8"	5/16"	66'-0"	18"×3/4"	1/4"	Varies	—	—	—	3/4"	3/8"	2 1/8"	1 1/4"	3 3/4"	9@15" = 11'-3"	7@19" = 11'-1"	24" Max. Spacing	
FS9	83.6'					1/4"		—	—	—	—	—	—	18"×7/8"	5/16"	F.L.	—	—	—	—	—	—	3/4"	1/4"	1"	7/8"	2 1/8"	9@19" = 14'-3"		24" Max. Spacing	
FS10	77.3'			66"×7/16"	16"×3/4"	1/4"	F.L.	—	—	—	—	—	—	18"×3/4"	1/4"	F.L.	—	—	—	—	—	—	3/4"	1/8"	3/4"	7/8"	1 3/4"	10@19" = 15'-10"		24" Max. Spacing	
FS12	89.9'			50"×3/8"	18"×3/4"	1/4"	F.L.	—	—	—	—	—	—	20"×1 3/8"	5/16"	56'-0"	20"×7/8"	5/16"	Varies	—	—	—	3/4"	3/8"	2 1/8"	1/2"	3"	9@13" = 9'-9"	8@17" = 11'-4"	6@21" = 10'-6"	24" Max. Spacing
FS14	82.9'			50×3/8"	15"×5/8"	1/4"	F.L.	—	—	—	—	—	—	18"×1 1/4"	5/16"	F.L.	—	—	—	—	—	—	3/4"	1/4"	1 3/4	5/8	2 5/8	12@15" = 15'-0"	7@20" = 11'-8"	24" Max. Spacing	
FS15 (B,C)	79.4'				15"×5/8"	1/4"		—	—	—	—	—	—	18"×1 1/4"	5/16"		—	—	—	—	—	—	3/4"	*	*	*	*	12@15"=15'-0"	7@20"=11'-8"		
FS16(A,B)	74.8'				15"×5/8"	1/4"		—	—	—	—	—	—	18"×1/8"	5/16"		—	—	—	—	—	—	3/4"	*	*	*	*	12@15"=15'-0"	7@20"=11'-8"		
FS17	68.0'			50"×3/8"	14"×5/8"	1/4"	F.L.	—	—	—	—	—	—	16"×1"	5/16"	F.L.	—	—	—	—	—	—	3/4"	1/8"	1"	1"	2 1/8"	12@14" = 14'-0"	6@19" = 9'-6"	24" Max. Spacing	
FS21(A,B)	76.4'			Varies	15×5/8"	1/4"	F.L.	—	—	—	—	—	—	18"×3/4"	1/4"	F.L.	—	—	—	—	—	—	3/4"	*	*	*	*	8@12"=8'-0"	9@18" = 13'-6"	24" Max. Spacing	
S23(A,B)	164.4'			66"×7/16"	24"×2 1/4"	1/2"	76'-0"	24"×1 3/4"	3/8"	20'-0"	24"×1"	5/16"	Varies	24"×3"	1/2"	90'-0"	24"×2"	3/8"	2F0"	24"×1"	5/16"	Varies	1"	*	*	*	*	13@16" = 17'-4"	5@20" = 8'-4"	24" Max. Spacing	
S24	153.0'				24"×1 5/8"	3/8"	84'-0"	24"×1"	5/16"	Varies	—	—	—	24"×2 5/8"	3/8"	82'-0"	24"×1 1/2"	5/16"	15'-0"	24"×1"	5/16"	Varies	1"	1 3/4"	4 1/8"	2 1/2"	8 3/8"	12@18"=18'-0"		24" Max. Spacing	
S25(A,B,C,D,E)	147.3'				24"×1 1/2"	5/16"	80'-0"	24"×1"	5/16"		—	—	—	24"×2 1/2"	3/8"	68'-0"	24"×1 3/4"	3/8"	18'-0"	24"×1"	5/16"	Varies	1"	*	*	*	*	12@16" = 16'-0"	7@20" = 11'-8"	24" Max. Spacing	
S26	138.6'				20"×1 5/8"	3/8"	86'-0"	20"×7/8"	5/16"		—	—	—	24"×2"	3/8"	66'-0"	24"×1 1/2"	5/16"	15'-0"	24"×1"	5/16"	Varies	1"	1 1/4"	3 1/2"	2 5/8"	7 3/8"	11@16" = 14'-8"	7@20" = 11'-8"		
S27(A,B,C)	134.4'				20"×1 1/2"	5/16"	78'-0"	20"×7/8"	5/16"		—	—	—	24"×1 7/8"	3/8"	90'-0"	24"×1"	5/16"	Varies	—	—	—	1"	*	*	*	*	12@16"=16'-0"	7@20" = 11'-8"		
S28	125.1'				18"×1 1/4"	5/16"	70'-0"	18"×3 1/4"	1/4"		—	—	—	20"×1 7/8"	3/8"	60'-0"	20"×1 3/8"	5/16"	14'-0"	20"×3/8"	5/16"	Varies	1"	7/8"	3"	1/2"	5 3/8"	11@16" = 14'-8"	6@20" = 10'-0"		
S29(A,B)	114.0'				15"×1 1/4"	5/16"	64'-0"	15"×5/8"	1/4"	Varies	—	—	—	18"×1 3/8"	3/8"	76'-0"	18"×7/8"	5/16"	Varies	—	—	—	1"	*	*	*	*	10@16" = 13'-4"	6@20" = 10'-0"		
S30	99.0'				15"×3/4"	1/4"	F.L.	—	—	—	—	—	—	18"×1 3/8"	5/16"	65'-0"	18"×3/4"	1/4"		—	—	—	3/4"	3/8"	2"	1 1/2"	3 7/8"	9@15" = 11'-3"	7@19" = 11'-1"		
S31	98.0'				15"×3/4"	1/4"		—	—	—	—	—	—	18"×1 7/8"	5/16"	65'-0"	18"×3/4"	1/4"		—	—	—	3/4"	3/8"	2"	1 1/4"	3 5/8"	9@15" = 11'-3"			
S32(A,B)	92.0'				15"×5/8"	1/4"		—	—	—	—	—	—	18"×1 1/4"	5/16"	52'0"	18"×3/4"	1/4"	Varies	—	—	—	3/4"	*	*	*	*	9@17" = 12'-9"			
S33	85.0'			66"×7/16"	15"×5/8"	1/4"	F.L.	—	—	—	—	—	—	18"×1 1/8"	5/16"	F.L.	—	—	—	—	—	—	3/4"	1/4"	1 1/4"	1"	2 1/2"	9@17" = 12'-9"			
S39	85.5'			50"×3/8"	15"×7/8"	5/16"	F.L.	—	—	—	—	—	—	18"×1 5/8"	3/8"	60'-0"	18"×3/4"	1/4"	Varies	—	—	—	3/4"	3/8"	1 7/8"	1/2"	2 3/4"	13@13" = 14'-1"	7@18" = 10'-6"	24" Max. Spacing	
S40	85.5'				15"×3/4"	1/4"		—	—	—	—	—	—	18"×1 3/8"	5/16"	54'-0"	18"×3/4"	1/4"		—	—	—	3/4"	3/8"	1 5/8"	5/8"	2 3/8"	14@15" = 17'-6"	7@19" = 11'-1"		
S41 (B,C,D)	79.1'				15"×5/8"	1/4"		—	—	—	—	—	—	18"×1 1/4"	5/16"	50'-0"	18"×3/4"	1/4"		—	—	—	3/4"	*	*	*	*	12@14"=14'-0"	8@18" = 12'-0"		
S42	76.7'				15"×5/8"	1/4"		—	—	—	—	—	—	18"×1 1/4"	5/16"	50'-0"	18"×3/4"	1/4"	Varies	—	—	—	3/4"	1/4"	1 1/2"	1"	2 3/4"	15@13" = 16'-3"	7@18" = 10'-6"		
S43	73.6'			50"×3/8"	15"×5/8"	1/4"	F.L.	—	—	—	—	—	—	18"×1 1/8"	5/16"	F.L.	—	—	—	—	—	—	3/4"	1/4"	1/4"	5/8"	2 3/8"	12@14"=14'-0"	7@18"=10'-6"	24" Max. Spacing	

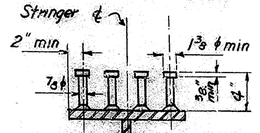
MARK		D.L. DEFL. STEEL	D.L. DEFL. CONCR.	V.C. CAMBER	TOTAL CAMBER
FS2	A	1 7/8"	4 1/2"	2 1/2"	8 7/8"
	B			3 3/4"	10 1/8"
FS3	A	1 1/2"	4"	2 3/4"	8 1/4"
	B			3"	8 1/2"
FS4	A	1 1/4"	4"	3 1/4"	6"
	B			3"	8 1/4"
FS5	A	1 1/4"	3 5/8"	2"	6 7/8"
	B			2 5/8"	7 1/2"
FS6	A	7/8"	3 1/4"	2 1/2"	6 5/8"
	B			2 5/8"	6 3/4"
FS7	A	3/8"	2 1/8"	1 1/4"	3 3/4"
	B			1 1/2"	4"
FS15	B	1/4"	1 1/2"	1/2"	2 1/4"
	C			1 1/8"	2 7/8"
FS16	A	1/4"	1 1/4"	5/8"	2 1/8"
	B			3/8"	1 7/8"
FS21	A	1"	1 3/8"	5/8"	2 3/8"
	B	8		1"	2 1/2"
S23	A	2 1/8"	4 5/8"	4 1/8"	10 7/8"
	B			3 3/4"	10 1/2"
S25	A	1 1/2"	4"	2 1/2"	8"
	B			2 3/4"	8 1/4"
	C			3"	8 1/2"
	D			1 3/4"	7 1/4"
	E			3/4"	6 1/4"
S27	A	1"	3 1/2"	2 5/8"	7 1/8"
	B			2"	6 1/2"
	C			2 1/2"	7"
S29	A	5/8"	2 5/8"	1 1/2"	4 3/4"
	B			1 1/4"	4 1/2"
S32	A	1/4"	1 3/4"	1 1/4"	3 3/4"
	B			1"	3"
S41	B	1/4"	1 5/8"	1/2"	2 3/8"
	C			5/8"	2 1/2"
	D			1"	2 3/8"

⚠ For Dimensions "W" and "E" see End Diaphragm Details - Sheet No. B15

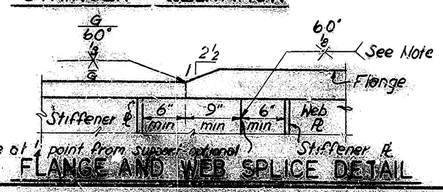
Note R: First Intermediate stiffener shall be set at half regular stiffener spacing P



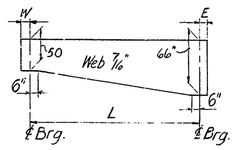
STRINGER ELEVATION



SHEAR CONNECTOR DETAILS



FLANGE AND WEB SPLICE DETAIL



FS 21

Notes:
1. Location of web splices and flange splices not indicated on design drawings to be approved by the Engineer.
2. Web splices to be full penetration buttweld. Grind to a flush surface on outside face of exterior stringers only.
3. Flange splices must be completed before flanges are welded to webs.
4. Each stringer shall be so fabricated that the specified camber shall remain in the stringer after all shop welding has been completed.
5. Longitudinal stiffener Pls are to be placed on the outside of exterior stringers only.
6. Intermediate stiffeners, all cross-frame connection plates and bearing stiffeners are to be set truly vertical under full dead load.
7. Intermediate stiffeners shall to be 2 Pls 4"x 3/8" (one on each side) for all interior stringers. All exterior stringers shall have intermediate stiffener Pl 6"x 3/8" on the inner side only. Place intermediate stiffeners and cross-frame connection plates tight against bottom flange. Do not weld to bottom flange.
8. Length of stringers for detailing shall be computed by the contractor.
9. Width of Bearing Shiffeners on Interior side of Fascia Stringers and all Interior Stringers shall be as follows:
   8" All Stringers without shoe build-up having skew angle above 7°
   10" All Stringers with shoe build-up having skew angle above 7°
   12" All Stringers having skew angles less than 4°
   For Skew angles See Sheets B3, B5, B9.
   Width of Bearing Stiffeners on Exterior side of Fascia Stringers shall be 8".
10. If Stringers are too long to ship in one length the contractor has the option of proriding field splices. Welded field splices shall be as shown on this sheet. Only welded field splices may be used on fascia stringer. Riveted or High Strength bolted field splices may be used as an alternate on Interior Stringers. See specifications for requirements of field splices.

B14
B45

REVISION	BY	CKD.	DATE

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280
MUNICIPALITY: NEWARK
SECTION: 7D
COUNTY: ESSEX

WELDED STRINGER SCHEDULE

PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
ENGINEERS
NEW YORK TRENTON

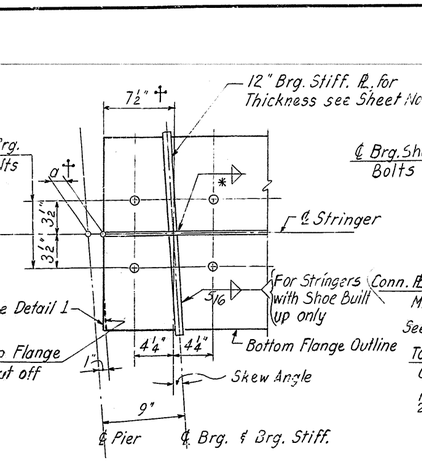
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DATE: Jan. 1968
SHEET NO. 101 OF ~~132~~ 133

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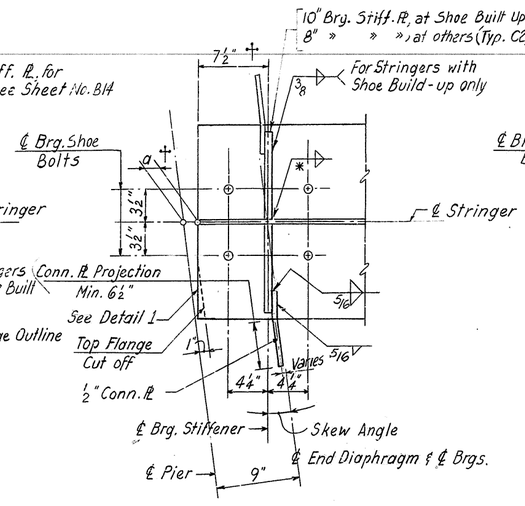
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0730276-7

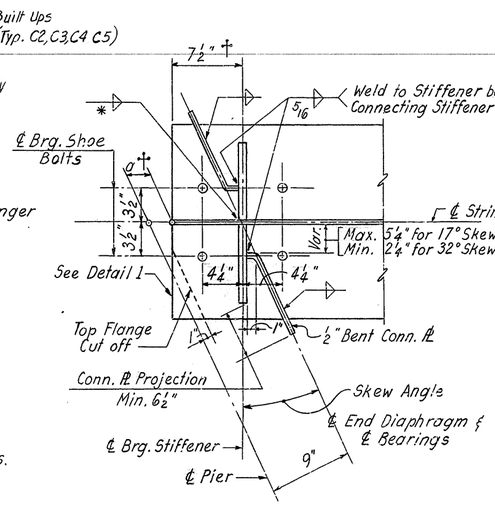
FED. ROAD DIV. NO.	FED. AID PROJECT NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
I	N.J.-I-280-6(36)60	N.J.	1967	102	~~132~~ 133



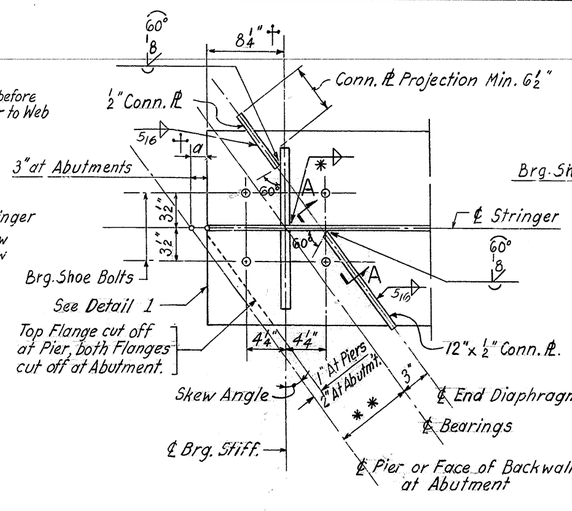
TYPE C1 FOR MAX. SKEW 4°



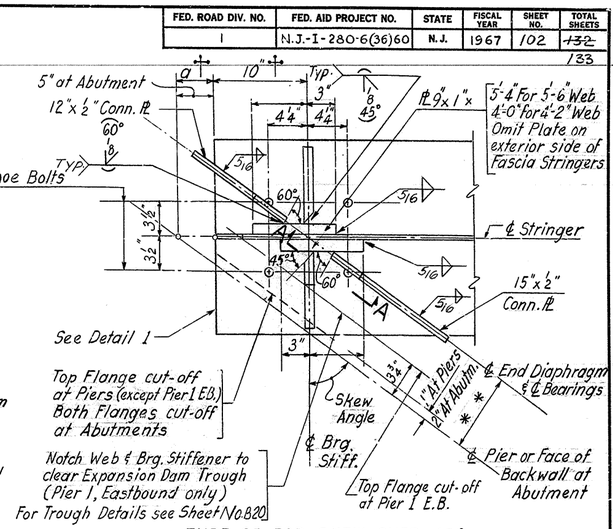
TYPE C2 FOR SKEW FROM 7° TO 17°



TYPE C3 FOR SKEW OVER 17° TO 32°



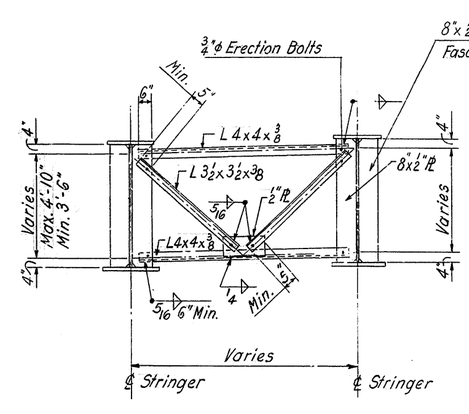
TYPE C4 FOR SKEW OVER 32° TO 45°

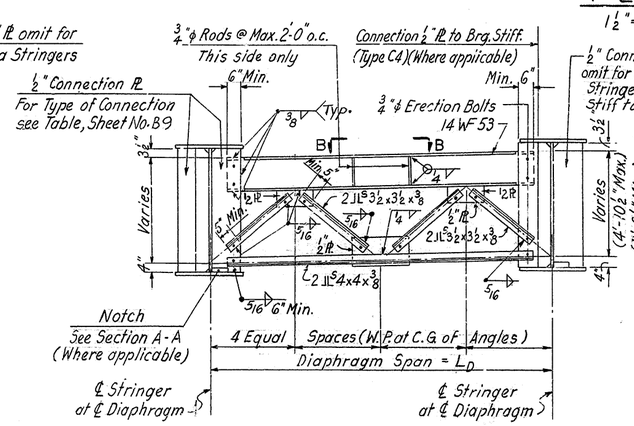


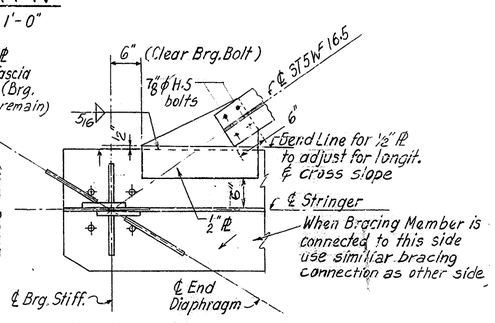
TYPE C5 FOR SKEW OVER 45°

BEARING STIFFENER & END DIAPHRAGM CONNECTING PLATE DETAILS FOR VARIOUS SKEW ANGLES

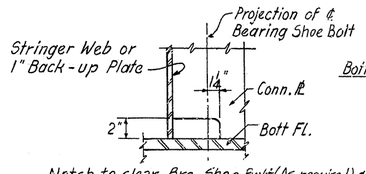
PLAN
1½" = 1'-0"



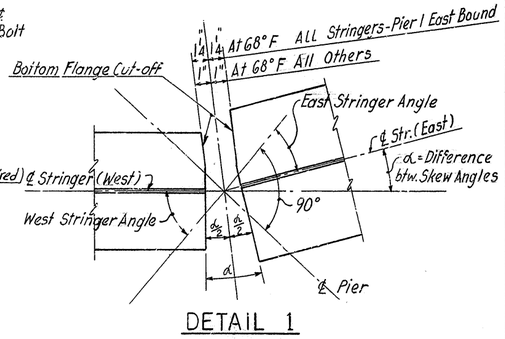




TYPICAL BRACING CONNECTION AT END DIAPHRAGMS
For C5 as shown, For others similar.
¾" = 1'-0"

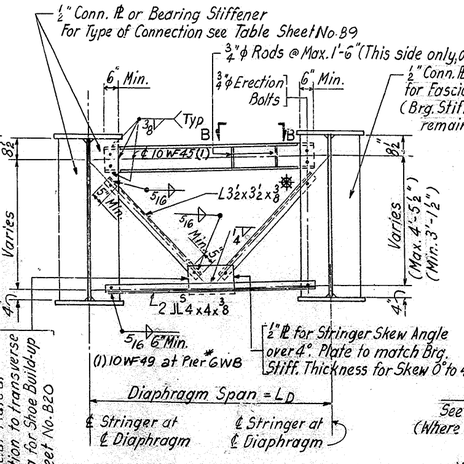


SECTION A-A
1½" = 1'-0"

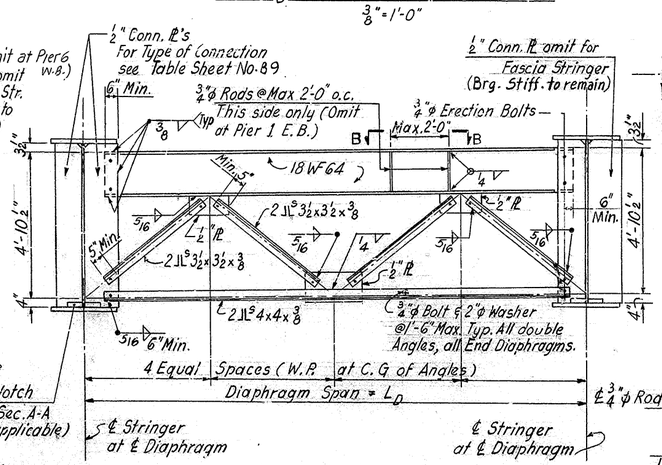


DETAIL 1
TYPICAL BOTTOM FLANGE CUT-OFF AT PIERS
No Scale

TYPICAL INTERMEDIATE DIAPHRAGM
⅜" = 1'-0"



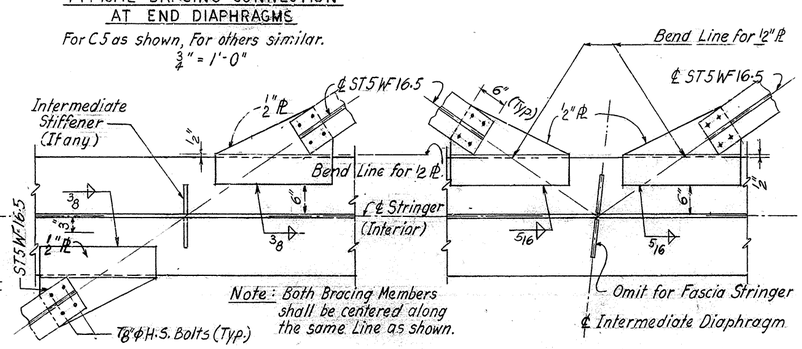
END DIAPHRAGM TYPE D1
FOR L_D LESS THAN 11 FT
⅜" = 1'-0"



END DIAPHRAGM TYPE D2
FOR L_D ABOVE 11 FT TO MAX 14 FT
⅜" = 1'-0"

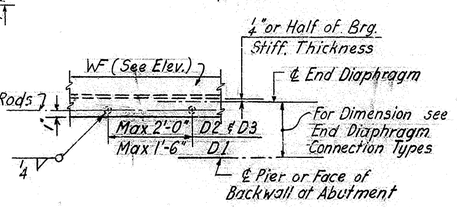
Note: All End Diaphragms are shown in Elevation looking toward Stringer Span.

END DIAPHRAGM TYPE D3
FOR L_D ABOVE 14 FT
⅜" = 1'-0"



TYPICAL BRACING CONNECTION AT STRINGER AND BRACING INTERSECTION
¾" = 1'-0"

TYPICAL BRACING CONNECTION AT INTERMEDIATE DIAPHRAGMS
¾" = 1'-0"



SECTION B-B
(No Scale)

Notes:
1. * See Bearing Stiffener weld size, Sheet No. B14
2. ** For Dimension see Framing Plan or Abutment Dwg's, Sheets No. B3, B5, B12, B13.
3. † Dimensions 7½", 8¼" and 10" apply to Interior Stringers at all Piers, except Pier 1, Eastbound Roadway. For Fascia Stringers at all Piers, except Pier 1 (E.B.) use α = 1" at 68°F. For Fascia Stringers at Pier 1 (E.B.) use α = 1½" at 68°F. For Interior Stringers at Pier 1 (E.B.) use α = 4" at 68°F.
4. ✻ Use 2 JL 3½x3½x⅜ for Diaphragms at Piers 6 and 7.

B13 8-45

RECOMMENDED
PARSONS, BRINCKERHOFF, QUADE & DOUGLAS
BY W. T. Gutman
APPROVED
DIRECTOR & CHIEF BRIDGE ENGINEER
STATE HIGHWAY DEPARTMENT

REVISION	BY	CKD.	DATE

NEW JERSEY STATE HIGHWAY DEPARTMENT
DIVISION OF BRIDGES

ROUTE 280 VIADUCT

ROUTE: 280 SECTION: 7D
MUNICIPALITY: NEWARK COUNTY: ESSEX

STEEL SECTIONS & DETAILS

PARSONS, BRINCKERHOFF, QUADE & DOUGLAS ENGINEERS
NEW YORK TRENTON

SCALE: As Shown
DATE: Jan. 1968
SHEET NO. 102 OF ~~132~~ 133

0730 102 133 277