

NEW JERSEY MEADOWLANDS COMMISSION

MEADOWLANDS ADAPTIVE SIGNAL SYSTEM
FOR TRAFFIC REDUCTION
FIBER OPTIC LINK

MASSTR

TOWNSHIP OF LYNDHURST, BERGEN COUNTY, NEW JERSEY

OCTOBER 2014



TIGER₂



KEY MAP
N.T.S.

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3	ESTIMATE & DISTRIBUTION OF QUANTITIES
4-9	FIBER OPTIC LINK PLANS
10-16	CONSTRUCTION DETAILS
17-22	ITS DETAILS

NOTICE:
LOCATIONS OF CONDUITS, JUNCTION BOXES, TRAFFIC SIGNAL POLES, ETC. AS SHOWN ON THE PLANS ARE PLOTTED FROM AVAILABLE DATA ON FILE AND ARE NOT GUARANTEED AS TO EXACTNESS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND DEPTH OF ALL UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL USE THE LOCATIONS OF THE CONDUITS, JUNCTION BOXES, TRAFFIC SIGNAL POLES, ETC. AS AN AID IN DETERMINING EXACT LOCATIONS.

NJDOT 2007 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND NJDOT 2007 STANDARD SPECIFICATIONS FOR ELECTRICAL MATERIAL AND CONSTRUCTION SHALL GOVERN EXCEPT FOR THE SPECIFICATIONS OF NON-STANDARD NJDOT ITEMS, CONTAINED IN THE SPECIFICATIONS OF THE PROJECT.

STANDARD ROADWAY CONSTRUCTION/TRAFFIC CONTROL BRIDGE CONSTRUCTION DETAILS BOOKLET 2007, AND STANDARD ELECTRICAL DETAILS BOOKLET 2007, ARE APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

DAVID LIEBGOLD

NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 45897

HONG YUAN

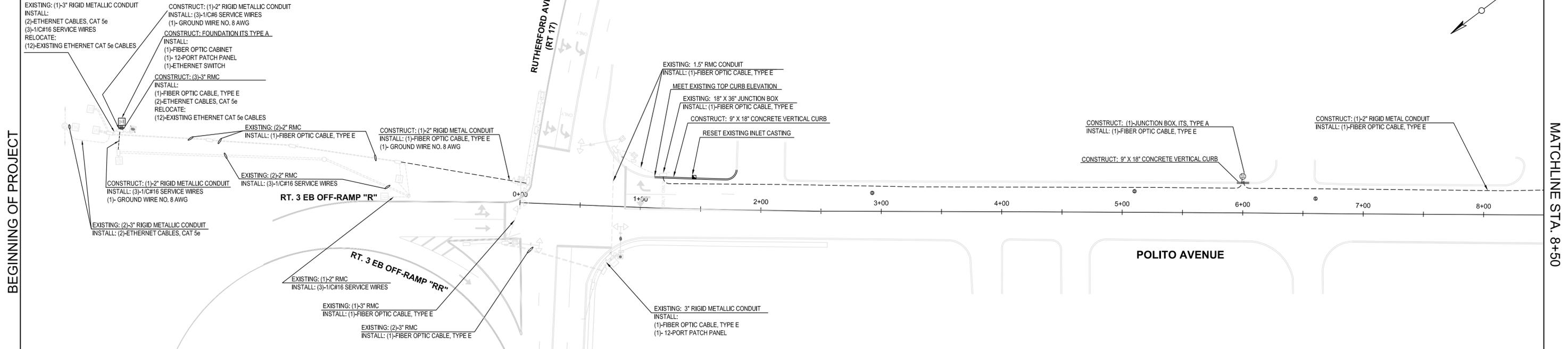
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 48481

LEOMAR ALMANZAR

NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 48348

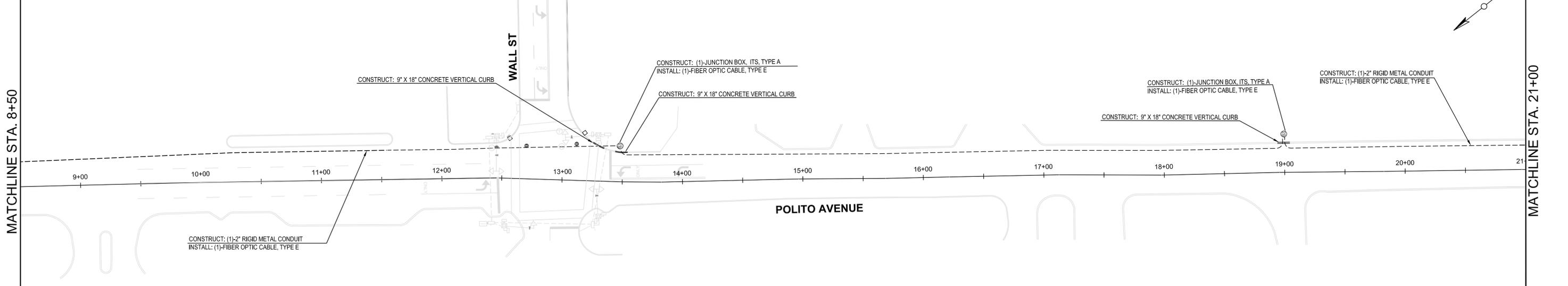
TOWNSHIP OF LYNDHURST

COUNTY OF BERGEN



TOWNSHIP OF LYNDHURST

COUNTY OF BERGEN



ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
311	ETHERNET CABLE, CAT 5e	235 LF
602	2" RIGID METALLIC CONDUIT	2,240 LF
603	3" RIGID METALLIC CONDUIT	40 LF
621	SERVICE WIRES, (3)-NO. 6 AWG	410 LF
622	GROUND WIRE, NO. 8 AWG	120 LF
631	9" x 18" CONCRETE VERTICAL CURB	110 LF
705	FIBER OPTIC CABLE, TYPE E	2,595 LF
711	FIBER OPTIC PATCH PANEL, 12 PORT	2 UNITS
741A	FIBER OPTIC CABINET SINGLE DOOR, DOUBLE SIDED	1 UNIT
743	FOUNDATION, ITS TYPE A	1 UNIT
743	JUNCTION BOX, ITS, TYPE A	3 UNITS

NOTE:

1. The price for resetting the existing inlet casting shall included in the price for bid item 631-9" x 18" Concrete Vertical Curb.

TCP NOTE:

MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE CONDUCTED IN ACCORDANCE WITH NJDOT TRAFFIC CONTROL DETAILS , 2007.

POLITO AVENUE SPEED LIMIT = 25 MPH
VALLEY BROOK AVENUE SPEED LIMIT = 25 MPH

REVISIONS:		DATE
NO.	DESCRIPTION	

DRAWN BY: LA	APPROVED BY: DL
CHECKED BY: DL	DATE: 10/13/2014

NEW JERSEY MEADOWLANDS COMMISSION
ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434



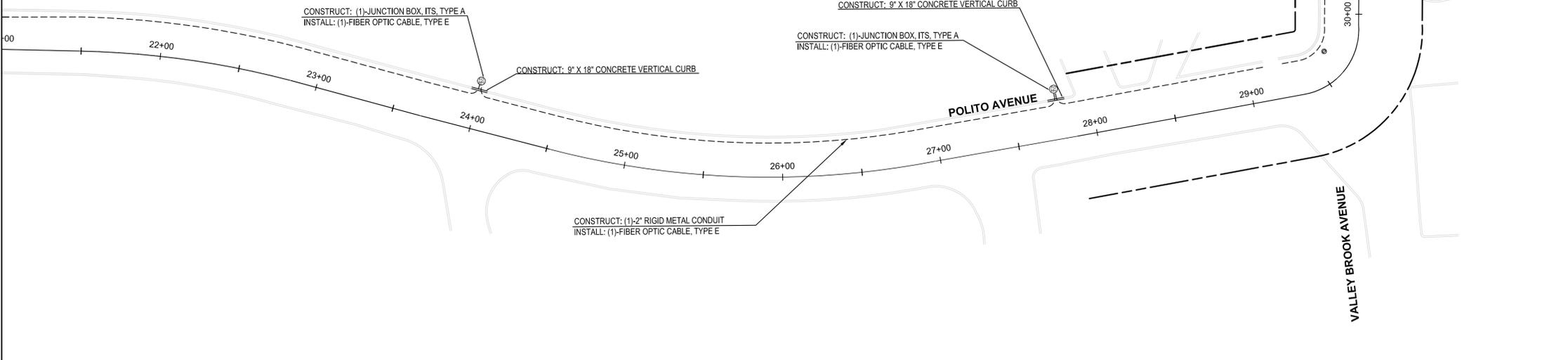
DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	FIBER OPTIC LINK PLAN -1- POLITO AVENUE (Sta 0+00 to Sta 21+00) LYNDHURST BERGEN, NJ SCALE: 1" = 40' NJMC PROJECT: FIBER OPTIC LINK SHEET #: 4 OF 22
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TOWNSHIP OF LYNDHURST

COUNTY OF BERGEN

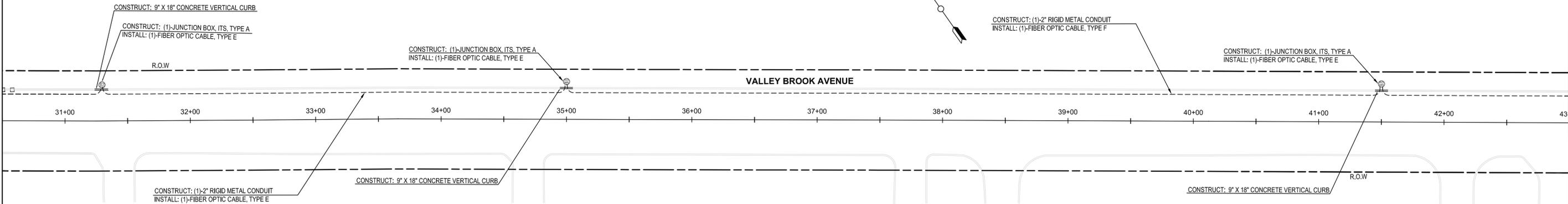
MATCHLINE STA. 21+00

MATCHLINE STA. 30+50



MATCHLINE STA. 30+50

MATCHLINE STA. 43+00



ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
602	2" RIGID METALLIC CONDUIT	2,420 LF
631	9" x 18" VERTICAL CURB	50 LF
705	FIBER OPTIC CABLE, TYPE E	2,685 LF
743	JUNCTION BOX, ITS, TYPE A	5 UNITS

TCP NOTE:

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MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

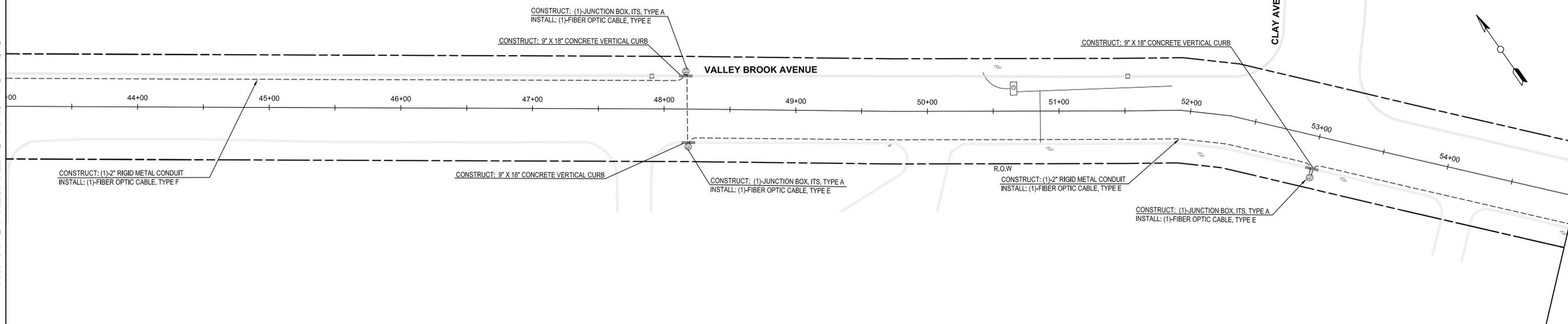


DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	FIBER OPTIC LINK PLAN -2- POLITO & VALLEY BROOK AVENUE LYNDHURST BERGEN, NJ SCALE: 1" = 40' NJMC PROJECT: FIBER OPTIC LINK SHEET #: 5 OF 22
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TOWNSHIP OF LYNDHURST COUNTY OF BERGEN

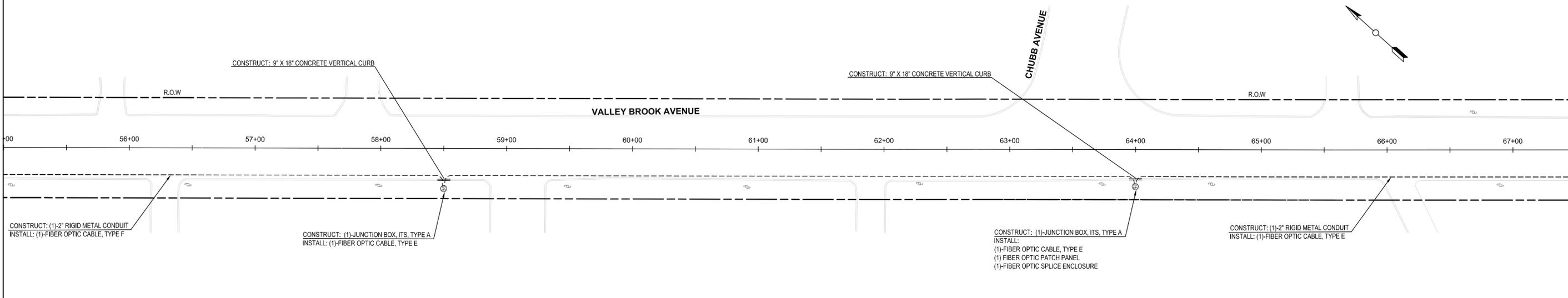
MATCHLINE STA. 43+00

MATCHLINE STA. 55+00



MATCHLINE STA. 55+00

MATCHLINE STA. 67+50



ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
602	2" RIGID METALLIC CONDUIT	2,790 LF
631	9" x 18" VERTICAL CURB	50 LF
705	FIBER OPTIC CABLE, TYPE E	3,120 LF
711	FIBER OPTIC PATCH PANEL	1 UNIT
712	FIBER OPTIC SPLICE ENCLOSURE	1 UNIT
743	JUNCTION BOX, ITS, TYPE A	5 UNITS

TCP NOTE:

MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE CONDUCTED IN ACCORDANCE WITH NJDOT TRAFFIC CONTROL DETAILS, 2007.

VALLEY BROOK AVENUE SPEED LIMIT = 25 MPH

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MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

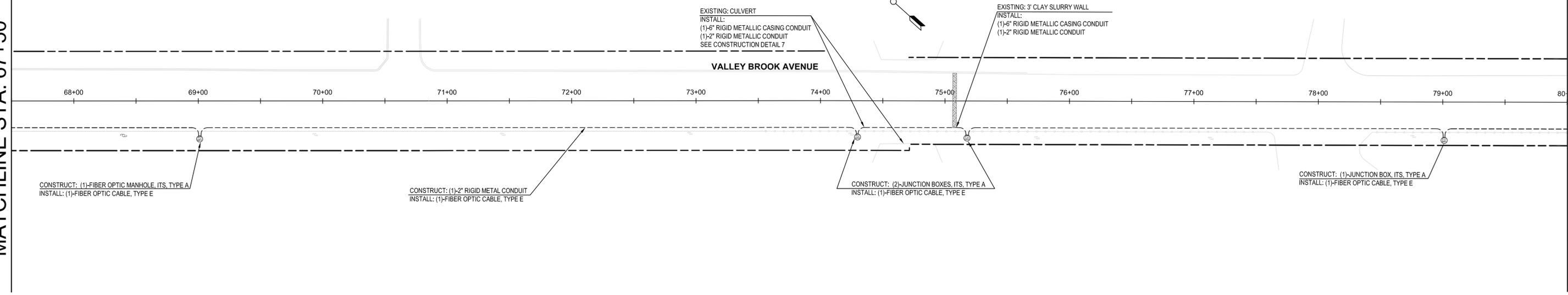


DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	FIBER OPTIC LINK -3- VALLEY BROOK AVENUE LYNDHURST BERGEN, NJ SCALE: 1" = 40' NJMC PROJECT: FIBER OPTIC LINK SHEET #: 6 OF 22
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TOWNSHIP OF LYNDHURST COUNTY OF BERGEN

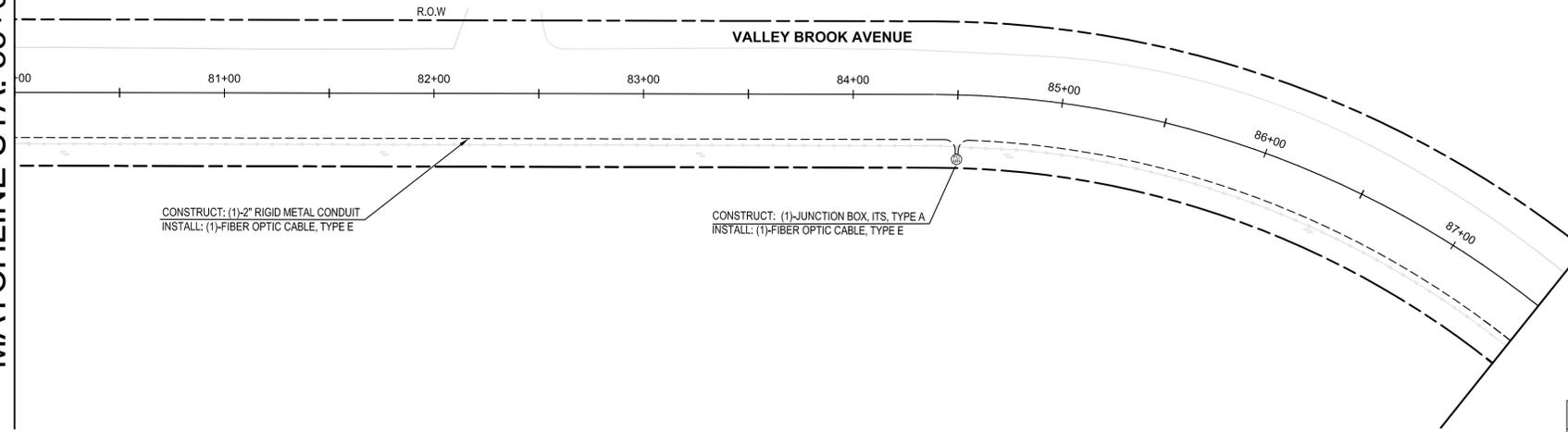
MATCHLINE STA. 67+50

MATCHLINE STA. 80+00



MATCHLINE STA. 55+00

MATCHLINE STA. 87+50



NOTE:

1. The 6" Rigid Metallic Casing Conduit shall be jacked through the clay slurry wall.
2. The price for jacking the 6" Rigid Metallic Casing Conduit shall be included in the price for bid item 604-6" Rigid Metallic Casing Conduit.

TCP NOTE:

MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE CONDUCTED IN ACCORDANCE WITH NJDOT TRAFFIC CONTROL DETAILS , 2007.

VALLEY BROOK AVENUE SPEED LIMIT = 25 MPH

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
602	2" RIGID METALLIC CONDUIT	2,235 LF
604	6" RIGID METALLIC CASING CONDUIT	100 LF
705	FIBER OPTIC CABLE, TYPE E	2,565 LF
743	JUNCTION BOX, ITS, TYPE A	5 UNITS

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CHECKED BY: DL	DATE: 10/13/2014

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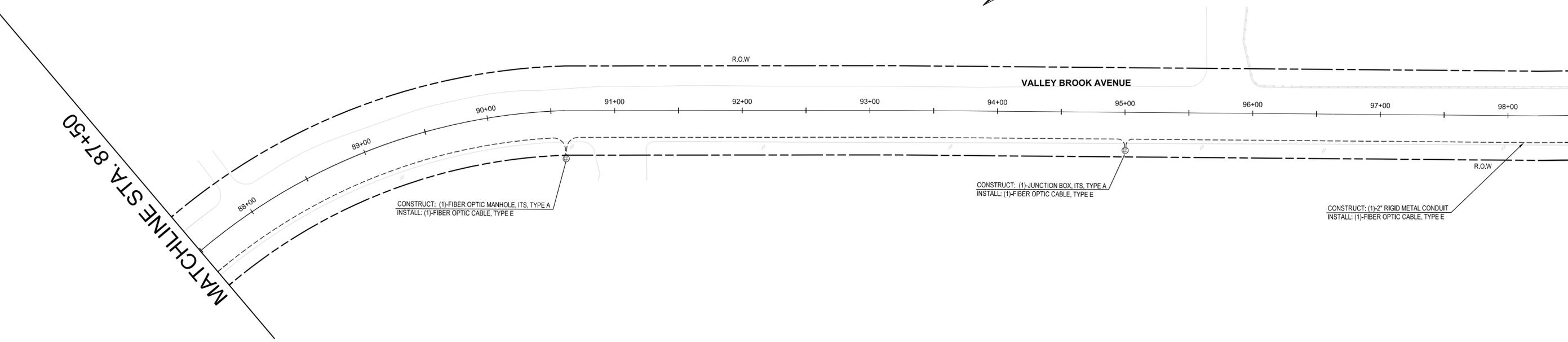
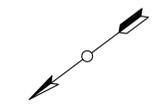


DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	FIBER OPTIC LINK -4- VALLEY BROOK AVENUE LYNDHURST BERGEN, NJ SCALE: 1" = 40' NJMC PROJECT: FIBER OPTIC LINK SHEET #: 7 OF 22
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TOWNSHIP OF LYNDHURST COUNTY OF BERGEN

MATCHLINE STA. 98+50

MATCHLINE STA. 87+50



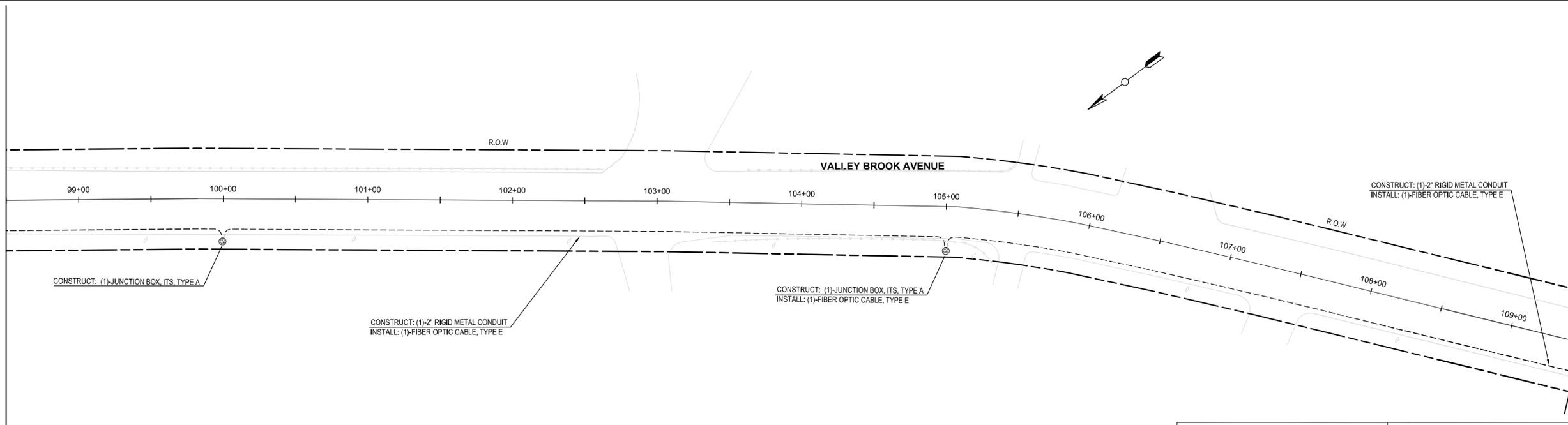
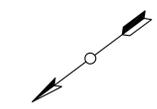
CONSTRUCT: (1)-FIBER OPTIC MANHOLE, ITS, TYPE A
INSTALL: (1)-FIBER OPTIC CABLE, TYPE E

CONSTRUCT: (1)-JUNCTION BOX, ITS, TYPE A
INSTALL: (1)-FIBER OPTIC CABLE, TYPE E

CONSTRUCT: (1)-2" RIGID METAL CONDUIT
INSTALL: (1)-FIBER OPTIC CABLE, TYPE E

MATCHLINE STA. 98+50

MATCHLINE STA. 109+50



CONSTRUCT: (1)-JUNCTION BOX, ITS, TYPE A

CONSTRUCT: (1)-2" RIGID METAL CONDUIT
INSTALL: (1)-FIBER OPTIC CABLE, TYPE E

CONSTRUCT: (1)-JUNCTION BOX, ITS, TYPE A
INSTALL: (1)-FIBER OPTIC CABLE, TYPE E

CONSTRUCT: (1)-2" RIGID METAL CONDUIT
INSTALL: (1)-FIBER OPTIC CABLE, TYPE E

TCP NOTE:

MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE CONDUCTED IN ACCORDANCE WITH NJDOT TRAFFIC CONTROL DETAILS, 2007.

VALLEY BROOK AVENUE SPEED LIMIT = 25 MPH

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
602	2" RIGID METALLIC CONDUIT	2,455 LF
705	FIBER OPTIC CABLE, TYPE E	2,720 LF
743	JUNCTION BOX, ITS, TYPE A	4 UNITS

REVISIONS:		
NO.	DESCRIPTION	DATE

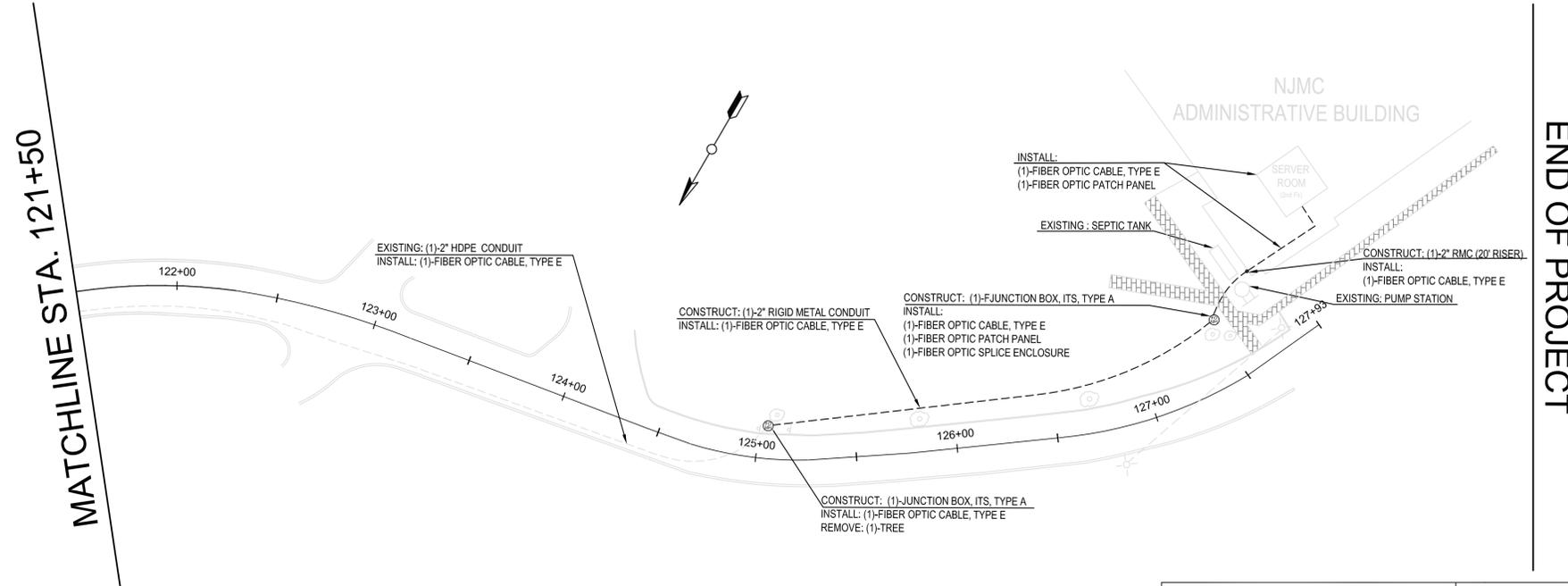
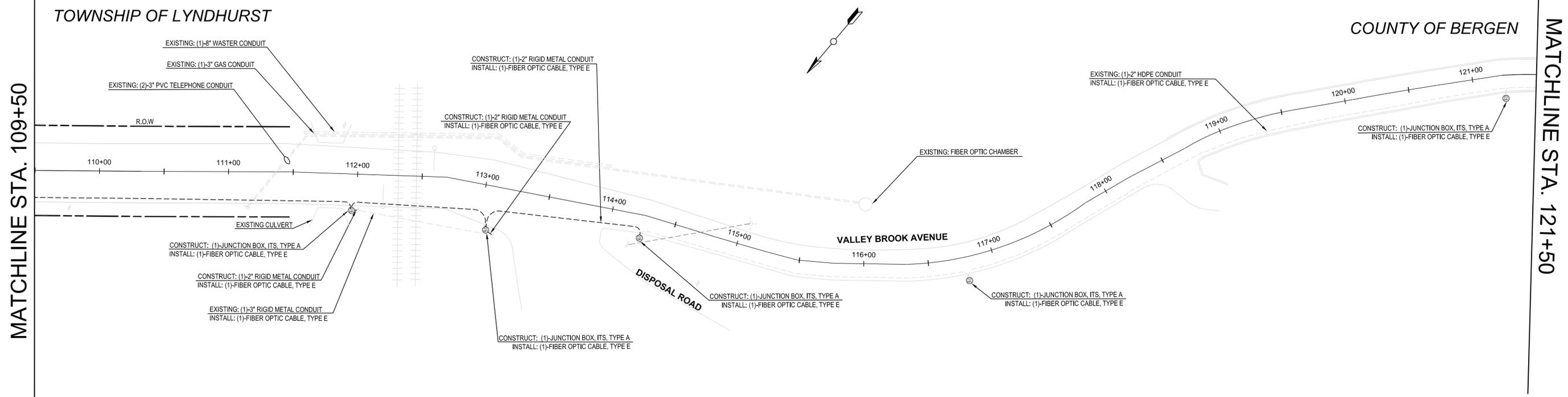
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DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	FIBER OPTIC LINK PLAN -5- VALLEY BROOK AVENUE LYNDHURST BERGEN, NJ SCALE: 1" = 40' NJMC PROJECT: FIBER OPTIC LINK SHEET #: 8 OF 22
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NOTE:
 THE PROPOSED FIBER OPTIC CABLE SHALL BE HUNG FROM THE FLOOR BEAMS INSIDE THE NJMC ADMINISTRATIVE BUILDING.

TCP NOTE:
 MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE CONDUCTED IN ACCORDANCE WITH NJDOT TRAFFIC CONTROL DETAILS , 2007.

VALLEY BROOK AVENUE SPEED LIMIT = 25 MPH

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
602	2" RIGID METALLIC CONDUIT	565 LF
705	FIBER OPTIC CABLE, TYPE E	5,455 LF
711	FIBER OPTIC PATCH PANEL	2 UNITS
712	FIBER OPTIC SPLICE ENCLOSURE	1 UNIT
743	JUNCTION BOX, ITS, TYPE A	7 UNITS

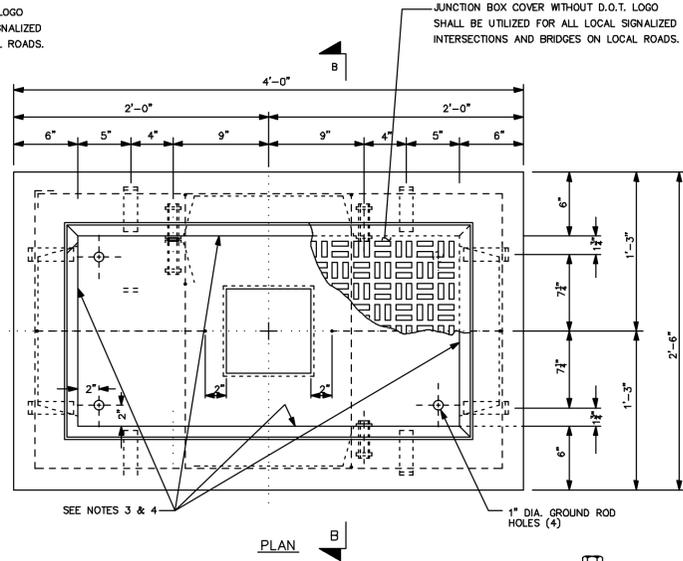
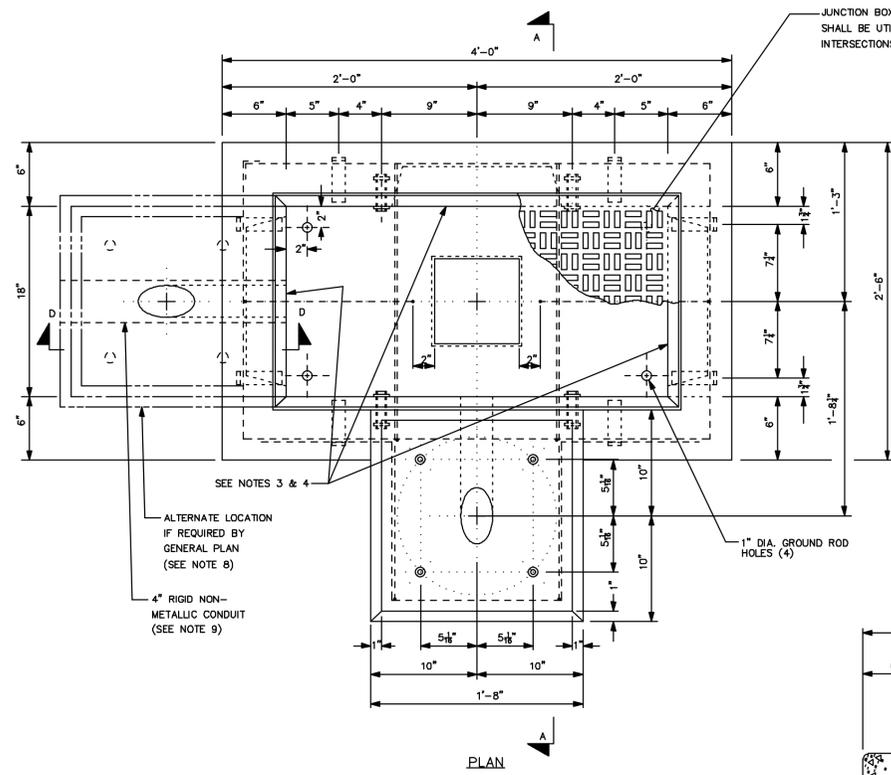
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DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	FIBER OPTIC LINK PLAN -6- VALLEY BROOK AVENUE LYNDHURST BERGEN, NJ SCALE: 1" = 40' NJMC PROJECT: FIBER OPTIC LINK SHEET #: 9 OF 22
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ITEM

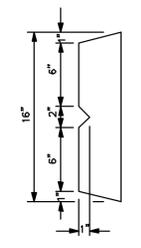
JUNCTION BOX FOUNDATION "JBF"

MARK	SIZE NO. 4 RODS			NO. RODS REQ.
	A	B	C	
I	41"	40"	40"	2
II	40"	24"	—	2
III	19"	—	—	2
IV	15"	16"	12"	4
V	44"	26"	4"	4
VI	1"	15"	—	2
VII	15"	26"	—	2
VIII	40"	59"	—	2
IX	15"	16"	4"	4

ITEM

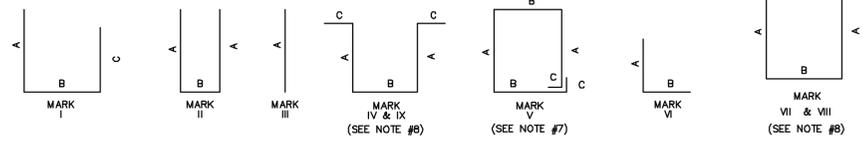
18" X 36" JUNCTION BOX "JB"

MARK	SIZE NO. 4 RODS			NO. RODS REQ.
	A	B	C	
II	42"	25"	—	4
III	21"	—	—	2
V	44"	26"	4"	3
VI	2"	16"	—	2
VII	15"	26"	—	2



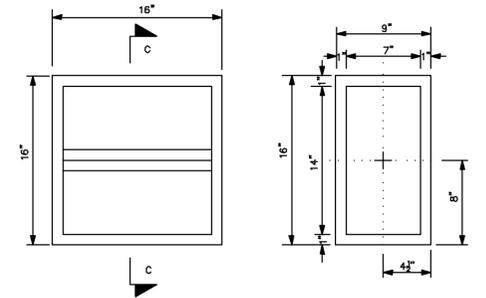
ALTERNATE RECESS ARRANGEMENT FOR END WALLS.

DETAIL "A"



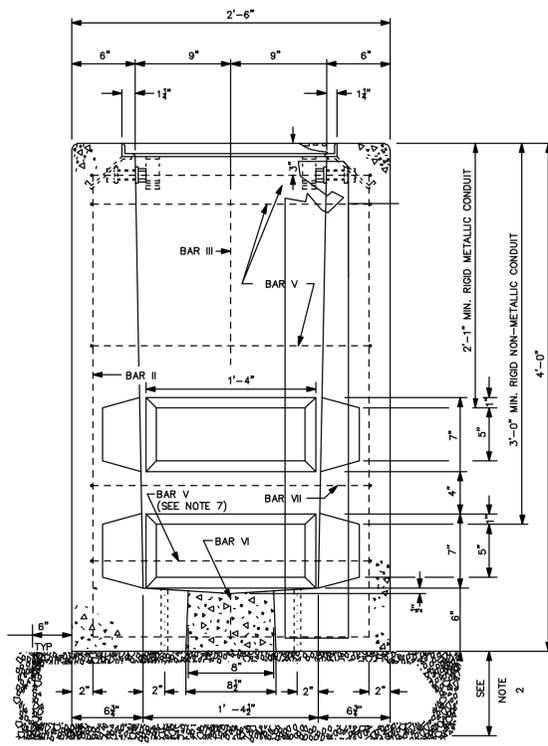
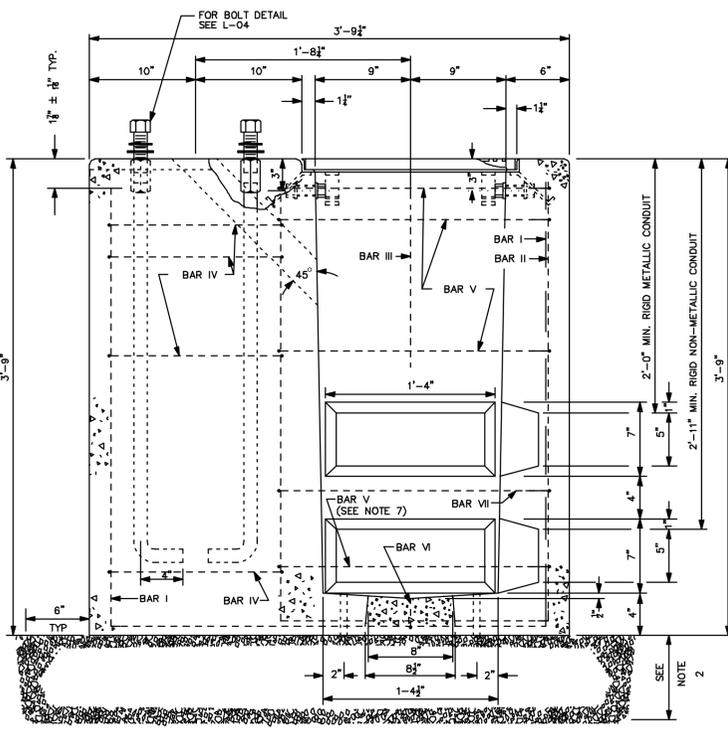
NOTES:

- 1.) THE CONSTRUCTION AND INSTALLATION OF PRECAST JUNCTION BOX FOUNDATION AND 18" X 36" JUNCTION BOX SHALL CONFORM TO SPECIFICATIONS FOR THE CONTRACT AND TO DETAILS AND NOTES SHOWN ON THIS DRAWING AND SHALL INCLUDE APPLICABLE NOTES AND DETAILS SHOWN ON DRAWING FOR CAST-IN-PLACE TYPE.
- 2.) COMPACTED 3/4" GRAVEL OR BROKEN STONE BASE REQUIRED FOR ALL PRECAST UNITS. MINIMUM DEPTH 8".
- 3.) A 16" X 7" X 4" RECESS TO BE PROVIDED IN SIDE AND END WALLS AS SHOWN.
- 4.) AFTER THE INSTALLATION OF CONDUIT, ALL OPEN RECESSES ARE TO BE COMPLETELY BRICKED AND FINISHED.
- 5.) AN ALTERNATE RECESS ARRANGEMENT MAY BE SUBSTITUTED AS SHOWN BELOW IN DETAIL "A" & "B". IF THIS ARRANGEMENT IS USED AND THE CONDUIT IS BROUGHT INTO THE JUNCTION BOX THROUGH THE TOP OF THE RECESS THEN THE ENTIRE RECESS MUST BE BRICKED FROM TOP TO BOTTOM.
- 6.) PRECAST JUNCTION BOX FOUNDATION MAY BE INSTALLED BEHIND THE GUIDE RAIL OR IN AREAS WHERE THE SLOPE IS LESS THAN 1:22.
- 7.) INSTALL THIS BAR WHEN USING DETAIL "A" ONLY.
- 8.) FOR ALTERNATE LOCATION FOR THE FOUNDATION, USE MARK VIII AND IX IN PLACE OF MARK I AND IV.
- 9.) ALIGN CONDUITS.



ALTERNATE RECESS (VERTICAL) ARRANGEMENT FOR SIDE WALLS.

DETAIL "B"

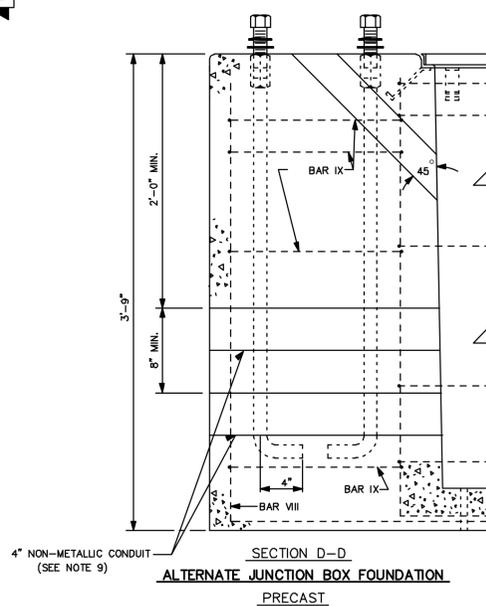
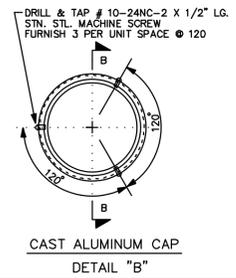
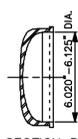


NOTE:

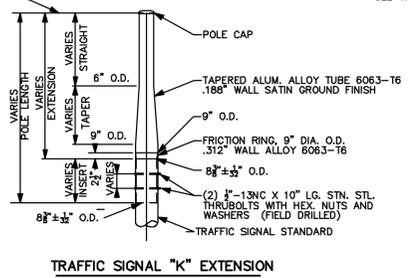
1. FURNISH WITH EACH STANDARD:
 - (1) FRICTION RING, 9" DIA. O.D. .312" WALL ALLOY 6063-T6
 - (1) POLE CAP
 - (2) 1/2"-13NC X 10" LG. STN. STL. THRU BOLTS WITH STN. STL. HEX NUTS AND STN. STL. WASHERS
2. CERTIFICATIONS SHALL BE FURNISHED THAT ALUMINUM ALLOY AND TEMPER SHOWN MEET REQUIREMENTS AS SET FORTH BELOW OR AS OTHERWISE INDICATED ON DRAWING.
3. CONTRACTOR SHALL PROVIDE DESIGN OF EXTENSIONS, INCLUDING FINAL DIMENSIONS, CERTIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER.

TABLE I - EXTENSION POLE

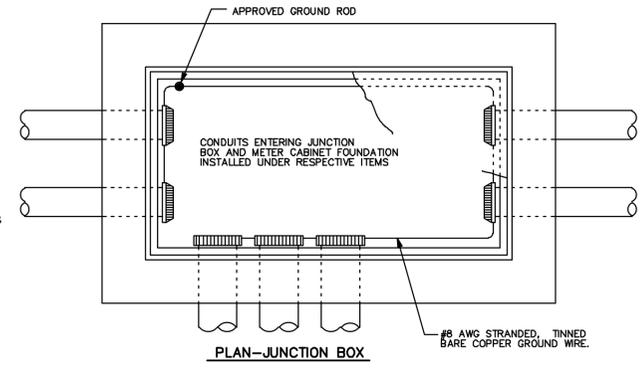
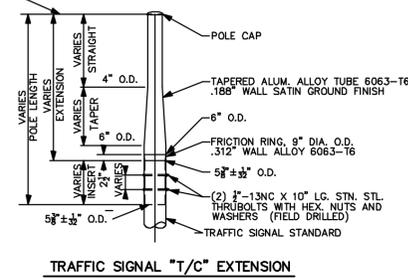
POLE TYPE	POLE LENGTH (FT)	EXTENSION (FT)	TAPER (FT)	STRAIGHT (FT)	INSERT (FT)
C	—	—	—	—	—
T	—	6.7	—	—	—
K	—	17.5	—	—	—



SEE TABLE I



SEE TABLE I



REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY: LA

APPROVED BY: DL

CHECKED BY: DL

DATE: 10/13/2014

NEW JERSEY MEADOWLANDS COMMISSION

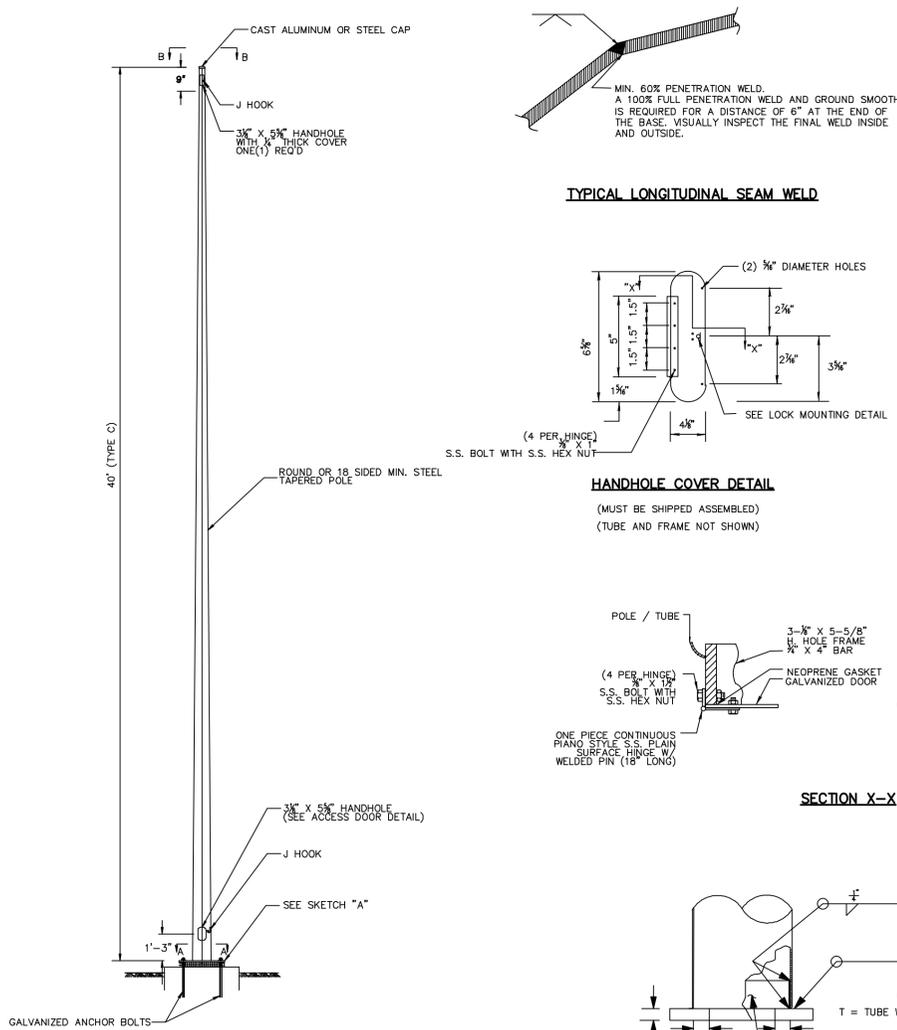
ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

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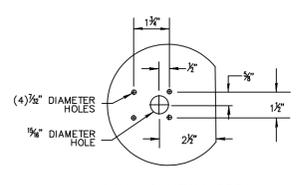
MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

TIGER₂

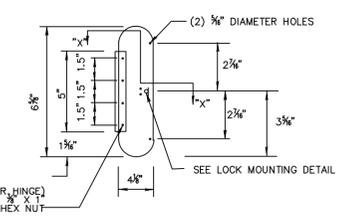
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SCALE: N.T.S.	NJMC PROJECT: FIBER OPTIC LINK	SHEET #: 10 OF 22	



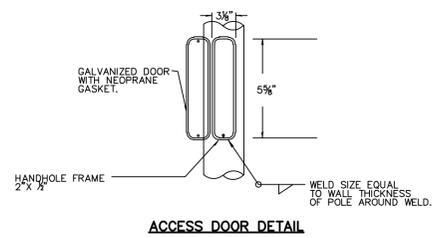
TYPICAL LONGITUDINAL SEAM WELD



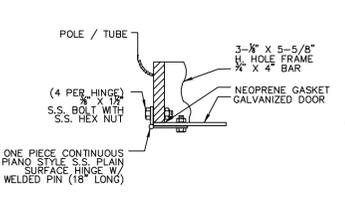
LOCK MOUNTING DETAIL



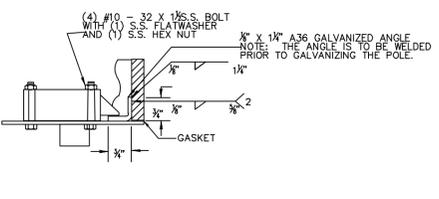
HANDHOLE COVER DETAIL



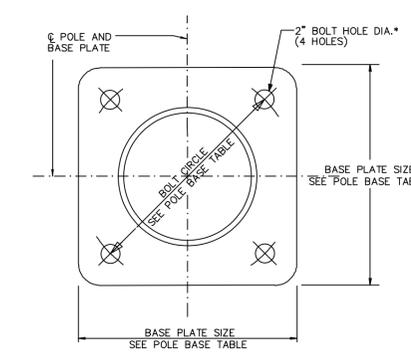
ACCESS DOOR DETAIL



SECTION X-X



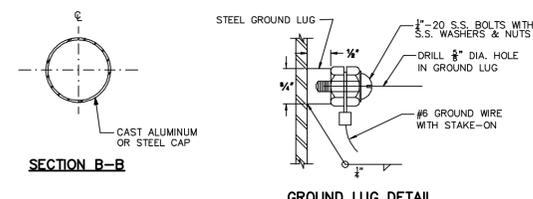
ITS STANDARD TYPE C



SECTION A-A (POLE BASE)

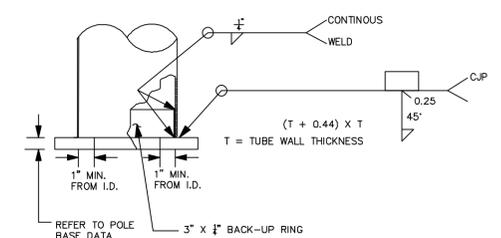
POLE BASE TABLE					
POLE TYPE	POLE HEIGHT	BASE PLATE SIZE (X) (Y) (Z)	BOLT CIRCLE DIAMETER (IN)	BASE PLATE THICKNESS (IN)	BOLT HOLE DIAMETER (IN)
C	40'	20 X 20	20	2	2*

* FOR ANCHOR BOLT DIA. 1 3/4"

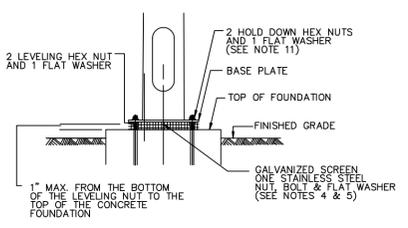


GROUND LUG DETAIL

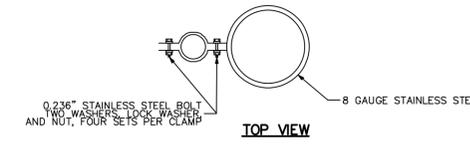
SECTION B-B



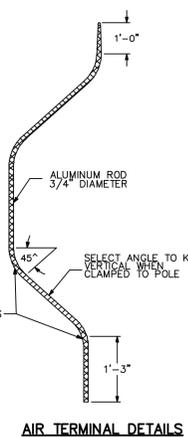
BASE PLATE



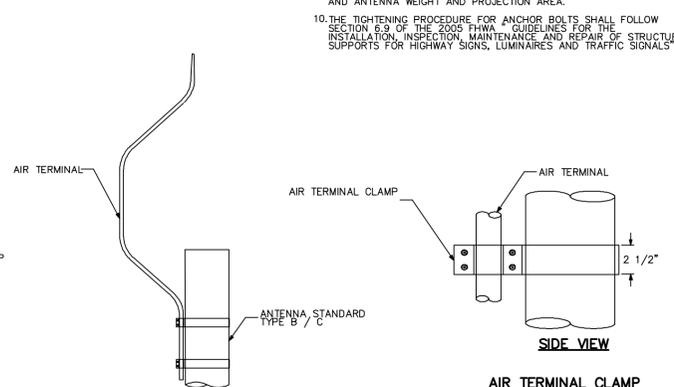
SKETCH "A"



TOP VIEW



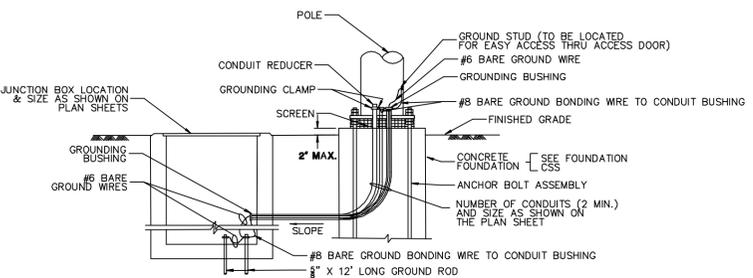
AIR TERMINAL DETAILS



AIR TERMINAL CLAMP

- NOTES:**
1. INSTALL ALL WIRING INSIDE THE POLE AND PROVIDE STRAIN RELIEF FOR ALL ANTENNA CABLES.
 2. SUPPORT ELECTRICAL AND COMMUNICATION CABLES WITH SEPARATE GRIPS.

POSITIONAL CAMERA



GROUNDING DETAIL

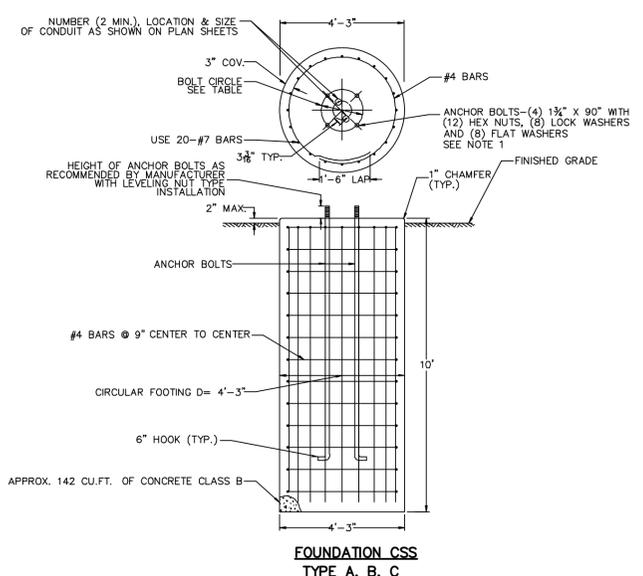
DESIGN SPECIFICATIONS:
 UTILIZE 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS AND TRAFFIC SIGNALS WITH THE LATEST INTERIM.
 DESIGN WIND VELOCITY 80 M.P.H. (APPENDIX C)
 DESIGN ICE LOAD 1/2 P.S.F.
 FATIGUE CATEGORY 2
 DESIGN LIFE 50 YEARS
 ENSURE ALL LOADS APPLIED TO ALL MEMBERS HAVE BEEN TAKEN INTO ACCOUNT FOR STRESS DESIGN AND ALL WELDED STRUCTURAL DETAILS HAVE BEEN ANALYZED AGAINST FATIGUE. THE DESIGN SHOULD CONSIDER, BUT IS NOT LIMITED TO, POLE HAND HOLE, BASE PLATE, POLE-TO-BASE CONNECTION, ANCHOR BOLTS AND EMBEDMENT.
 ENSURE MAXIMUM HORIZONTAL DEFLECTION AT THE TOP OF THE POLE COMPLETELY ASSEMBLED WITH RADIO TRANSCEIVERS, ANTENNAS, AND ALL FIXTURES ATTACHED DOES NOT EXCEED 2 INCHES FROM THE CENTER LINE DUE TO A 40 MPH WIND (USE FACTOR 1.3) WIND SPEED (APPENDIX C WIND PRESSURE FORMULA)

SUBMIT DETAIL PLANS AND DESIGN CALCULATIONS OF THE STANDARD POLE, RADIO TRANSCEIVER WEIGHT AND PROJECTION AREA, ANTENNA HEIGHT AND PROJECTION AREA, AND ANCHOR BOLT ASSEMBLY FOR APPROVAL. ENSURE THE DESIGN CALCULATIONS AND WORKING DRAWINGS ARE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY.

MATERIALS:
 TAPER THE STEEL POLE. ENSURE THE POLE MATERIAL CONFORMS TO ASTM SPECIFICATION A555, GRADE A (MIN. YIELD POINT 55 KSI). AS AN ALTERNATE TO THE POLE (18 SIDED MIN.) MAY BE FORMED FROM STEEL CONFORMING TO THE POLE (18 SIDED MIN.) GRADE 55. ALL OTHER STEEL CONFORMS TO ASTM SPECIFICATION A709 (AASHTO M720) GRADE 36 OR GRADE 50. ALL POLES REGARDLESS OF THICKNESS AND ALL OTHER STEEL PLATES GREATER THAN 1/2" THICKNESS SHALL MEET AASHTO REQUIREMENTS FOR NOTCH TOUGHNESS (CHARPY TESTING) ZONE 2. GALVANIZE THE ENTIRE UNIT OF THE POLE PER ASTM A123 AFTER FABRICATION.
 MANUFACTURER OR CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE BOLTS/ANCHOR BOLTS, NUTS AND WASHERS IN PACKAGE AND ENSURE THE CONNECTION SAFETY.

ENSURE ANCHOR BOLT MATERIALS CONFORM TO ASTM F1554, GRADE 36 OR 55. GALVANIZE THE ANCHOR BOLTS FOR THE FULL LENGTH OF THE BOLT, AS WELL AS NUTS AND WASHERS.
 PROVIDE STAINLESS STEEL FASTENERS (INCLUDING BOLTS, NUTS AND WASHERS) CONFORMING TO ASTM A307, GRADE 304 AND STRAIN RELIEF BUSHINGS (A307 TYPE 304) AND STRAIN RELIEF BUSHINGS (A307 TYPE 304) FOR ALL POLES REGARDLESS OF THICKNESS. MATERIALS OTHER THAN SPECIFIED SHALL BE APPROVED BY NJDOT.

- NOTES:**
1. ENSURE STEEL POLE CONSISTS OF ONE STEEL SEGMENT AND CONTAIN ONLY ONE LONGITUDINAL SEAM WELD. LAMINATED TUBES ARE NOT PERMITTED. SEE TYPICAL LONGITUDINAL SEAM WELD DETAIL.
 2. PROVIDE NEOPRENE DOOR GASKET CEMENTED TO DOOR.
 3. INSTALL ITS STANDARD IN CHIEF AREA BEYOND THE POLE IN ACCORDANCE WITH THE DEPARTMENT'S POLICY.
 4. PROVIDE A GALVANIZED SCREEN, WRAPPED AROUND THE BASE OF POLE.
 5. ENSURE THE GALVANIZED SCREEN HAS NO MORE THAN 9" OVERHANGS AND IS HELD TOGETHER WITH STAINLESS STEEL NUTS, BOLTS AND FLAT WASHERS.
 6. DO NOT GROUT UNDER THE POLE.
 7. PROVIDE ONE (1) LEVELING HEX NUT, TWO (2) HOLD DOWN HEX NUTS AND TWO (2) FLAT WASHER PER ANCHOR BOLT (SEE SKETCH A) DETERMINE THE PROPER LENGTH OF THE ANCHOR BOLT FOR PROJECTION AND EMBEDMENT. THE CLEARANCE BETWEEN THE TOP OF THE FOUNDATION AND THE BOTTOM OF THE LEVELING NUT SHALL NOT EXCEED 1/2". THE PROJECTION LENGTH SHALL BE A MINIMUM OF 9".
 8. ENSURE WELDING CONFORMS TO THE AWS D1.1 WELDING PROCEDURE QUALIFICATION WITH RADIOGRAPHIC TESTING TO FULL PENETRATION WELD JOINTS. WELDING TESTING CONFORM TO AWS D1.1, UNLESS OTHERWISE SPECIFIED.
 9. REFER TO MANUFACTURER'S SPECIFICATIONS FOR RADIO TRANSCEIVER AND ANTENNA WEIGHT AND PROJECTION AREA.
 10. THE TIGHTENING PROCEDURE FOR ANCHOR BOLTS SHALL FOLLOW SECTION 6.9 OF THE 2005 FHWA GUIDELINES FOR THE INSTALLATION, INSPECTION, MAINTENANCE AND REPAIR OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.



FOUNDATION CSS TYPE A, B, C

"BOLT CIRCLE TABLE"

FOUNDATION TYPE	POLE HEIGHT	ANCHOR BOLT CIRCLE DIAMETER	ANCHOR BOLT SPECIFICATION
C	40'	20"	ASTM F1554 GRADE 36 OR 55
B	55'	24"	ASTM F1554 GRADE 36 OR 55
A	75'	30"	ASTM F1554 GRADE 36 OR 55

GENERAL DESIGN SPECIFICATIONS:
 CONCRETE DESIGN STRESS:
 SPECIFIED COMPRESSIVE STRENGTH (f'c) (CLASS B).....3,000 PSI
 EXTREME FIBER COMPRESSIVE STRESS (fc).....1,200 PSI
 REINFORCEMENT STEEL DESIGN STRESS:
 YIELD STRENGTH (fy) (A615, GRADE 60).....60 KSI
 TENSILE STRENGTH (ts).....90 KSI

- NOTES:**
1. IF EXISTING SOIL APPEARS TO BE UNSUITABLE (SOFT, WET, COMPRESSIBLE, MUCK, ETC.) AND MAY NOT SUSTAIN CONSTRUCTION EQUIPMENT, NJDOT GEOTECHNICAL ENGINEERING UNIT, 609-530-3725, SHOULD BE CONTACTED.
 2. HOT DIP GALVANIZE ANCHOR BOLTS PER ASTM A153 FOR THE FULL LENGTH OF THE BOLT AFTER THREADING.
 3. MANUFACTURER IS TO PROVIDE ANCHOR BOLTS, ANCHOR BOLTS EMBEDMENT LENGTH, THREADED LENGTH AND PROJECTION LENGTH IS TO BE DETERMINED BY THE MANUFACTURER.
 4. LUBRICATE ANCHOR BOLT PROJECTION PORTION BEFORE MOUNTING THE POLE.
 5. FOR ANCHOR BOLT TIGHTENING PROCEDURE SEE NOTE 11 ON SHEET 25 OF 29 (ITS STANDARD TYPE A&B) AND NOTE 10 ON SHEET 25 OF 29 (ITS STANDARD TYPE C).

REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY: LA APPROVED BY: DL
 CHECKED BY: DL DATE: 10/13/2014

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

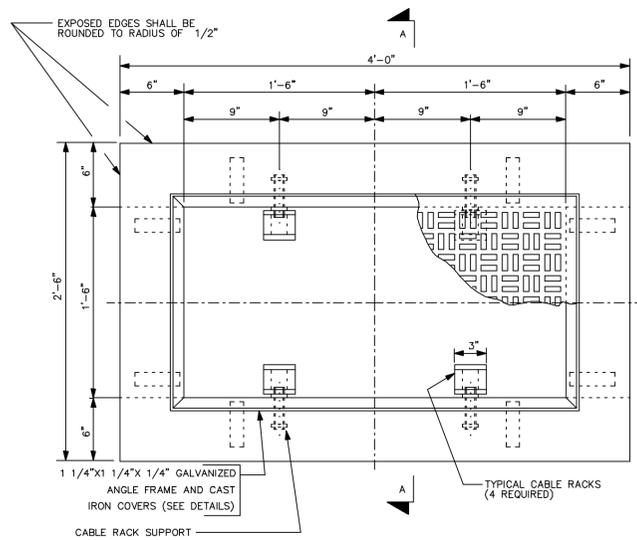
MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION



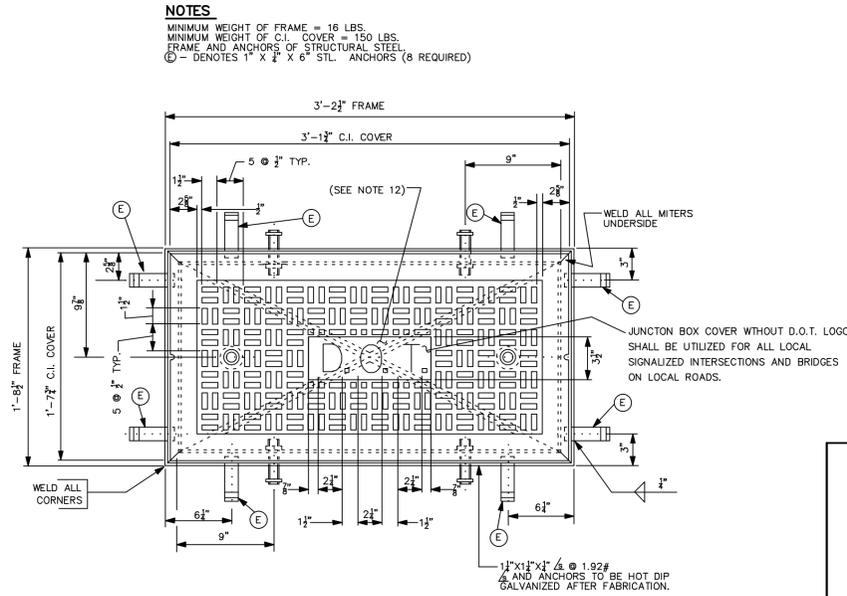




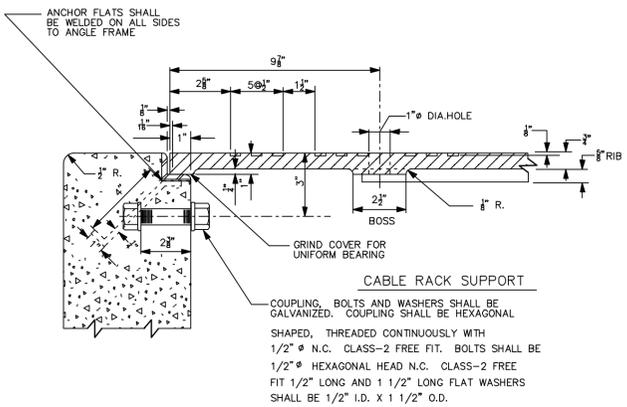
DAVID LIEBGOLD  PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN  PROFESSIONAL ENGINEER N.J. LIC. GE48461	LEOMAR ALMANZAR  PROFESSIONAL ENGINEER N.J. LIC. GE48348	CONSTRUCTION DETAILS -3- SCALE: N.T.S. NIMC PROJECT: FIBER OPTIC LINK SHEET #: 12 OF 22
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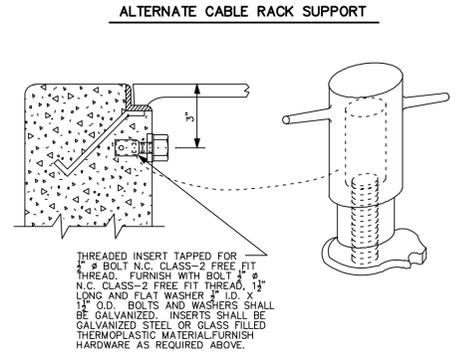
PLAN
18" X 36" JUNCTION BOX - CLASS "JB"
 CONCRETE CLASS "C"
 USING APPROVED 5/8" AGGREGATE
 0.8 CU. YD.



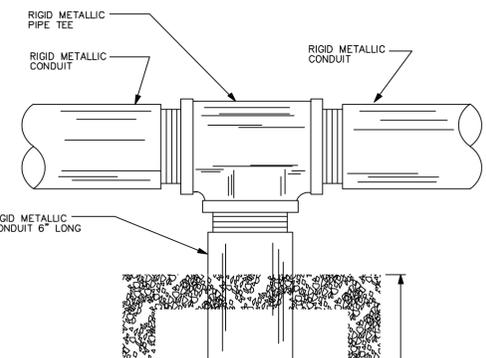
COVER & FRAME



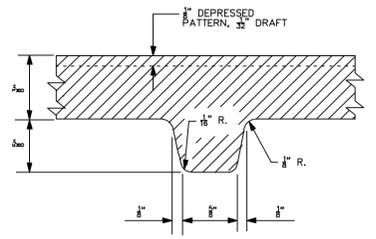
SECTION THRU JUNCTION BOX



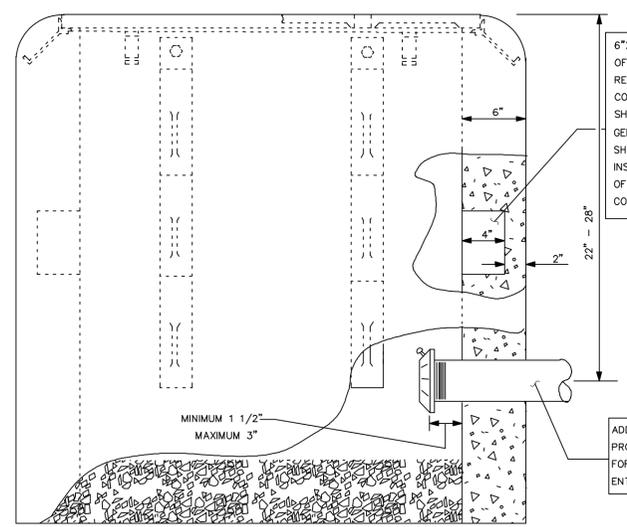
ALTERNATE CABLE RACK SUPPORT



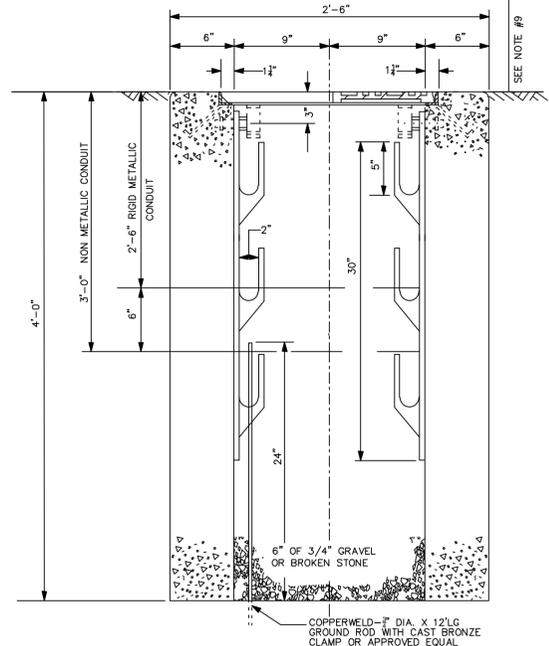
TYPICAL TEE DRAIN



SECTION OF RIB

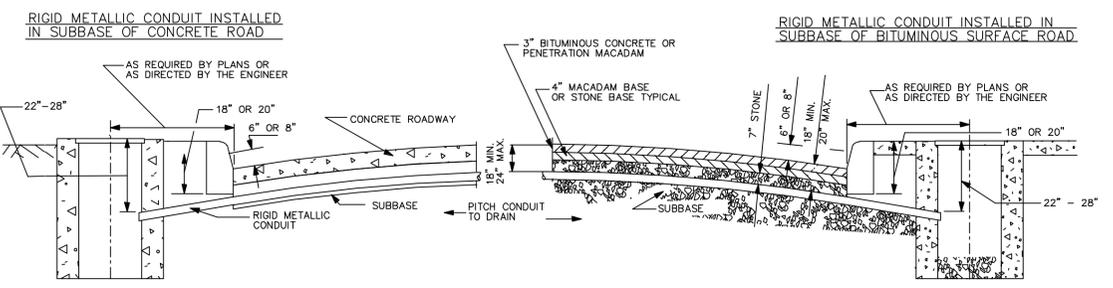


ELEVATION

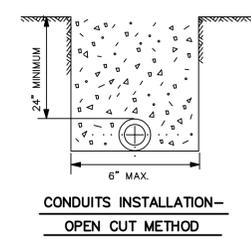


SECTION A-A

- NOTES:**
- JUNCTION BOX FOUNDATION SHALL BE SET PARALLEL TO THE CURB AND TOP OF JUNCTION BOX SHALL BE SET AT GRADE IN SIDEWALK, PAVED AREA, IN GRASS OR DIRT AREAS.
 - CABLE RACKS FURNISHED AND INSTALLED AS INDICATED.
 - BONDING AND GROUNDING INSULATED BUSHINGS SHALL BE INSTALLED ON METALLIC CONDUITS TERMINATING IN JUNCTION BOXES AND/OR FOUNDATIONS AND SHALL HAVE A FITTING TO PREVENT ENTRY OF FOREIGN MATTER PRIOR TO INSTALLATION OF WIRING.
 - A NYLON CORD, 125 POUND MINIMUM TEST STRENGTH, SHALL BE FURNISHED AND INSTALLED IN ALL CONDUITS. SEE SPECIFICATIONS.
 - CONDUITS SHALL ENTER JUNCTION BOX PERPENDICULAR TO WALLS OR AS APPROVED BY THE ENGINEER. A 2" SEPARATION SHALL BE MAINTAINED BETWEEN ADJACENT WALLS, CONDUITS, AND CABLE RACK LOCATIONS.
 - TERMINAL ENDS OF ALL METALLIC CONDUIT SHALL BE THREADED.
 - ALL NON-METALLIC CONDUITS SHALL TERMINATE WITH BELL END CONSTRUCTION IN JUNCTION BOX.
 - ALL UNUSED CONDUITS SHALL BE PLUGGED OR CAPPED.
 - ENGINEER MAY REQUIRE TOP OF JUNCTION BOX TO BE INCLINED IN ORDER TO CONFORM WITH FIELD CONDITIONS. JUNCTION BOX SHALL BE SET TO GRADE IN SIDEWALK AREA AND IN ALL OTHER AREAS.
 - WARNING TAPE SHALL BE A RED 4 MIL. FLEXIBLE POLYETHYLENE FILM WHICH IS RESISTANT TO ACIDS, BASES, HYDROCARBONS AND WATER.
 - IN INCLINE AREA, NO PART OF THE JUNCTION BOX SHALL EXTEND MORE THAN 4" ABOVE THE FINISH GRADE.
 - JUNCTION BOX COVER WITHOUT D.O.T. LOGO SHALL BE UTILIZED FOR ALL LOCAL SIGNALIZED INTERSECTIONS AND BRIDGES ON LOCAL ROADS.

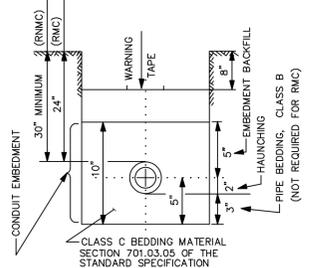


TYPICAL INSTALLATION OF UNDER ROADWAY RIGID METALLIC CONDUITS AND TYPICAL JUNCTION BOXES (18"x36") INSTALLATION
 SUBJECT TO APPROVAL OF THE ENGINEER



CONDUITS INSTALLATION - OPEN CUT METHOD

WARNING TAPE
 CAUTION CAUTION CAUTION
 ELECTRIC LINE BURIED BELOW
 6" TYP. BLACK LETTERS ON RED BACKGROUND



NON METALLIC CONDUIT & CUG INSTALLATION
TYPICAL CONDUIT INSTALLATION

REVISIONS		
NO.	DESCRIPTION	DATE

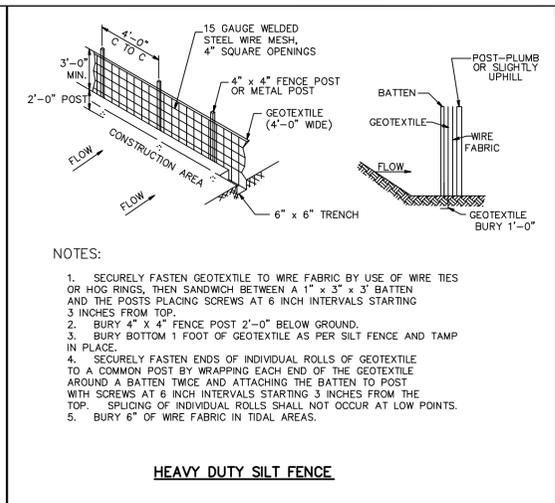
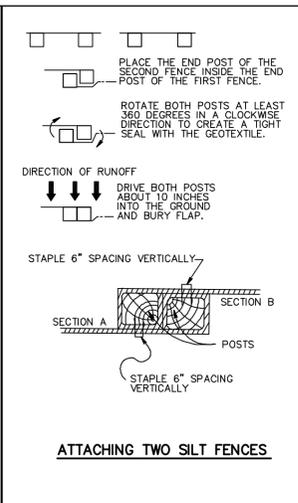
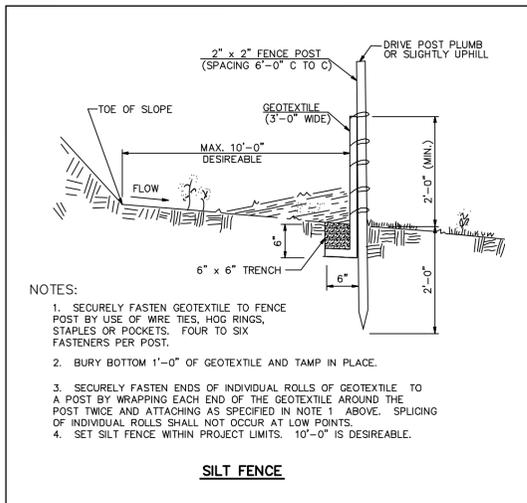
DRAWN BY: LA	APPROVED BY: DL
CHECKED BY: DL	DATE: 10/13/2014

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

TIGER

DAVID LIEBGOLD PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN PROFESSIONAL ENGINEER N.J. LIC. GE48461	LEOMAR ALMANZAR PROFESSIONAL ENGINEER N.J. LIC. GE48348	CONSTRUCTION DETAILS -4-
SCALE: N.T.S.	NJM PROJECT: FIBER OPTIC LINK	SHEET #: 13 OF 22	



FASTENERS FOR WOOD POSTS

WIRE STAPLES	GAUGE: 17 MIN.	CROWN: 3/4" WIDE	LEGS: 1/2" LONG	STAPLES/POST: 5 MIN.
SCREWS	LENGTH: 2"	PHILLIPS HEADS: 2"	SCREW/POST: 6 MIN.	

SOURCE: GA SWCC

FASTENER PLACEMENT

WOOD POST WITH STAPLE PLACEMENT

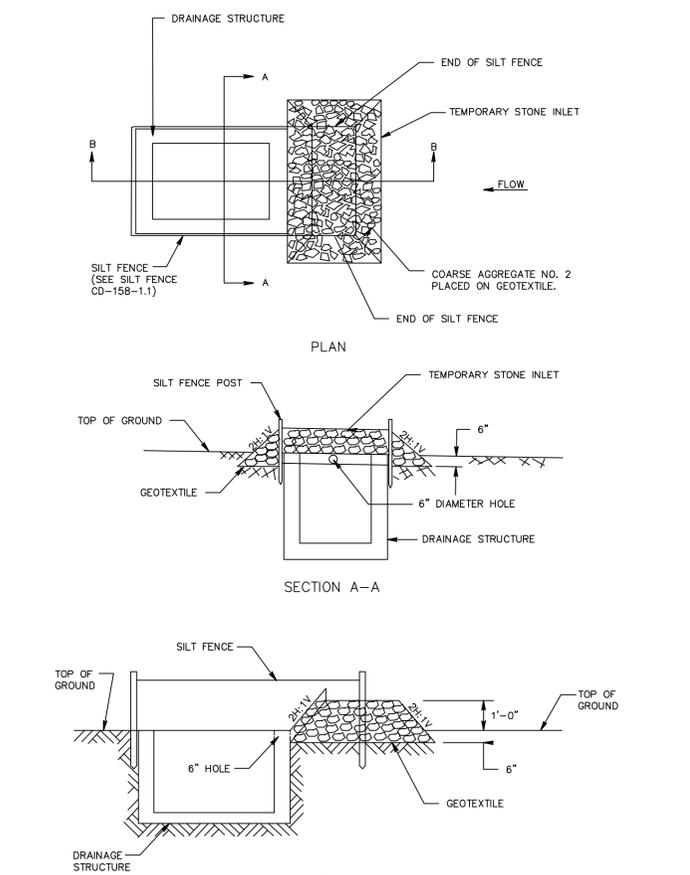
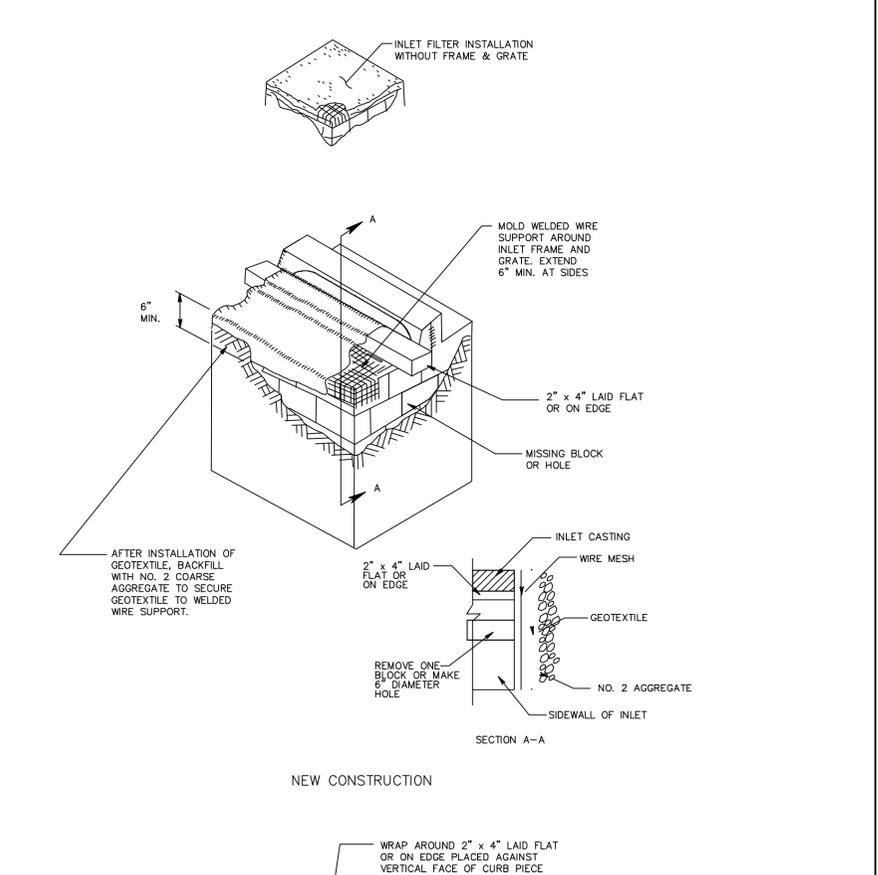
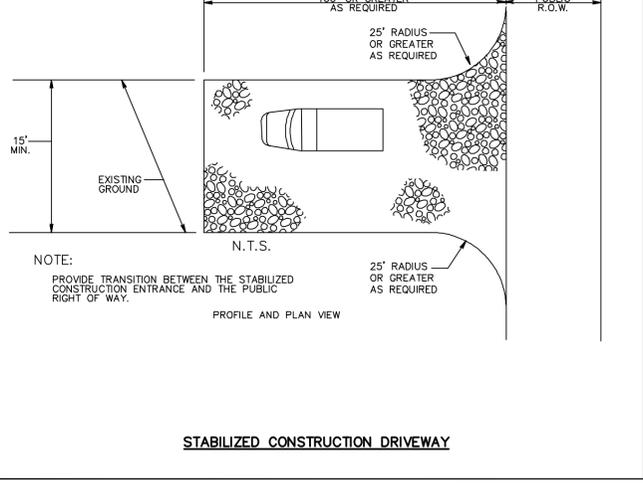
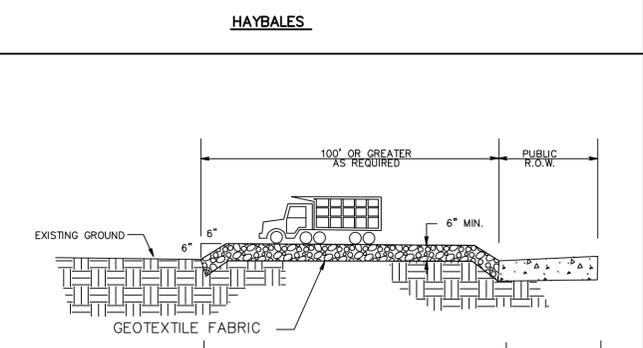
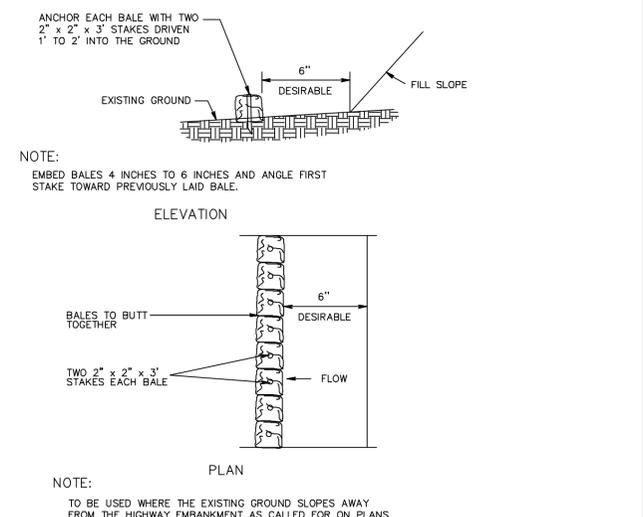
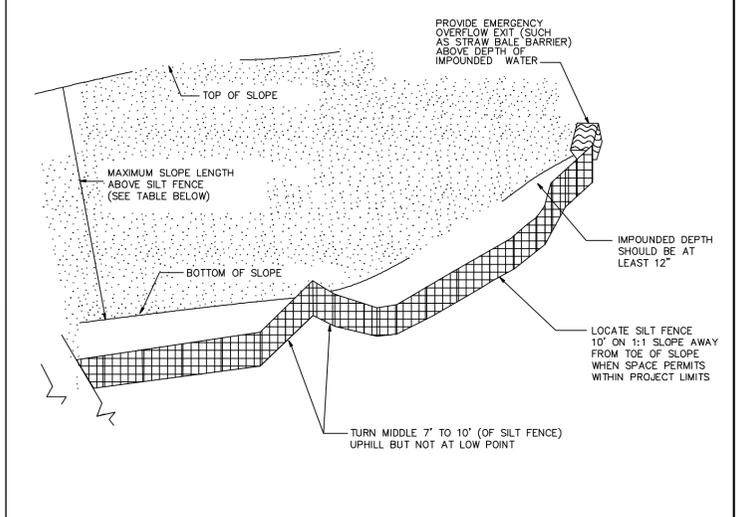
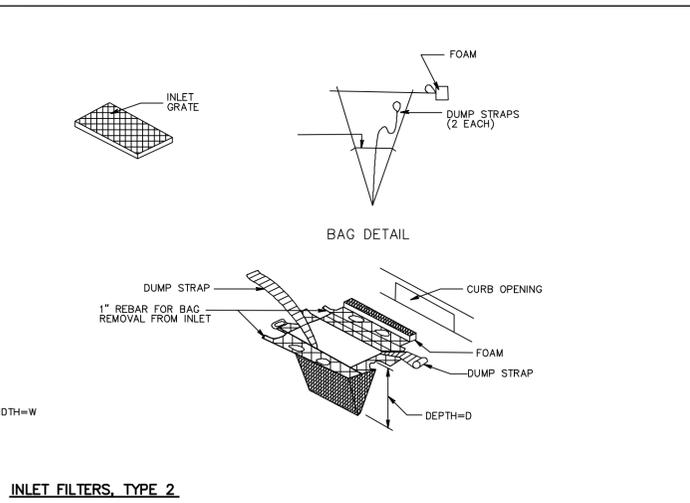
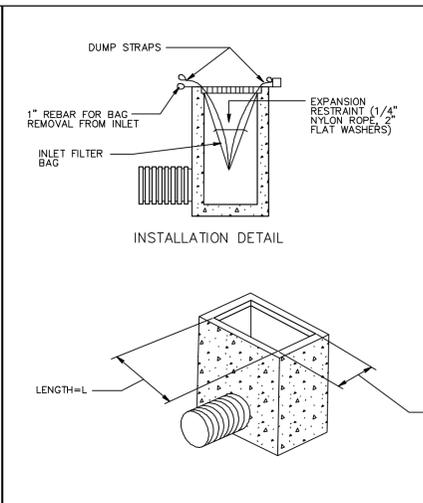
WOOD POST WITH BATTEN SCREW PLACEMENT

1" x 3" BATTEN

6"

GROUND

SILT FENCE FASTENER REQUIREMENTS



CRITERIA FOR SILT FENCE PLACEMENT

LAND SLOPE (PERCENT)	MAXIMUM SLOPE LENGTH ABOVE FENCE (FEET)
< 2	100
2 TO 5	75
5 TO 10	50
10 TO 20	25
>20 *	15

* IN AREAS WHERE THE SLOPE IS GREATER THAN 20% A FLAT AREA LENGTH OF 10 FEET BETWEEN THE TOE OF THE SLOPE AND THE FENCE SHOULD BE PROVIDED.

REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY: LA

APPROVED BY: DL

CHECKED BY: DL

DATE: 10/13/2014

DAVID LIEBGOLD

HONG YUAN

LEOMAR ALMANZAR

CONSTRUCTION DETAILS -6-

SCALE: N.T.S.

NJC PROJECT: FIBER OPTIC LINK

SHEET #: 15 OF 22

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MASSTR
MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

TIGER

DAVID LIEBGOLD

HONG YUAN

LEOMAR ALMANZAR

CONSTRUCTION DETAILS -6-

SCALE: N.T.S.

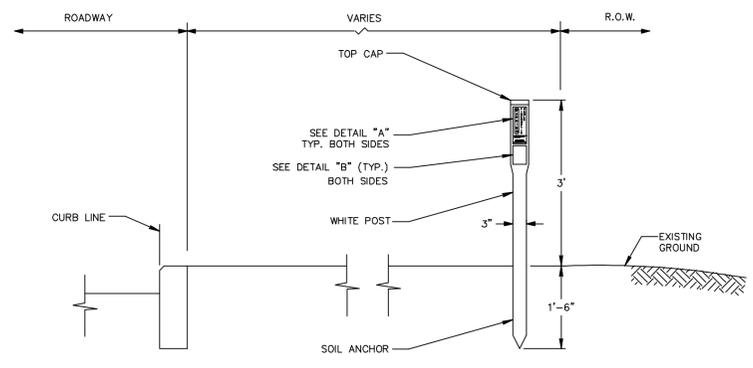
NJC PROJECT: FIBER OPTIC LINK

SHEET #: 15 OF 22

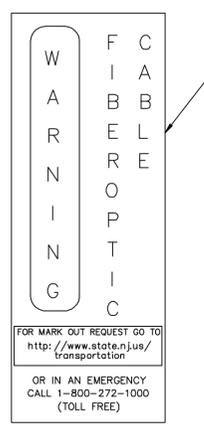
CAUTION: BURIED FIBER OPTIC CABLE BELOW
 CALL NJDOT TRAFFIC OPERATIONS
 NORTH 201-797-7314 OR SOUTH 856-486-6095

WARNING TAPE
 (BLACK LETTERS ON ORANGE BACKGROUND)

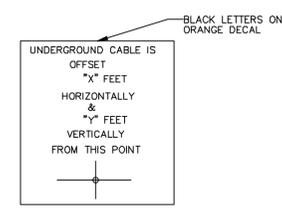
- NOTE:**
1. PROVIDE WARNING TAPE TO BE ORANGE, 4 MIL. FLEXIBLE POLYETHYLENE FILM AND IS RESISTANT TO ACIDS, BASES, HYDROCARBONS AND WATER.



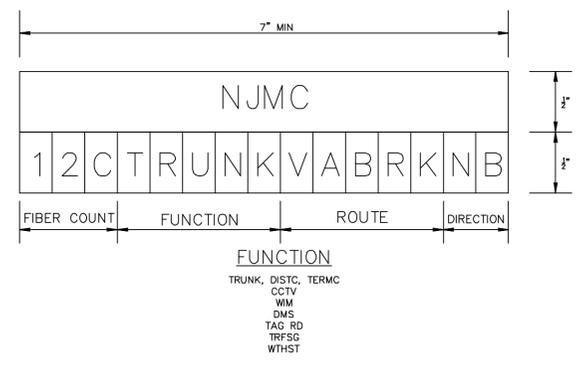
FIBER OPTIC CABLE MARKER
 SPACE MARKERS 500' APART



DETAIL "A"
 3"x 9" WARNING DECAL

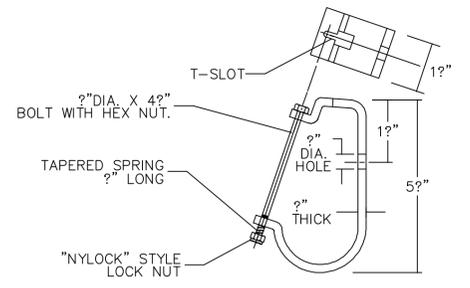


DETAIL "B"
 3"x4" WARNING DECAL

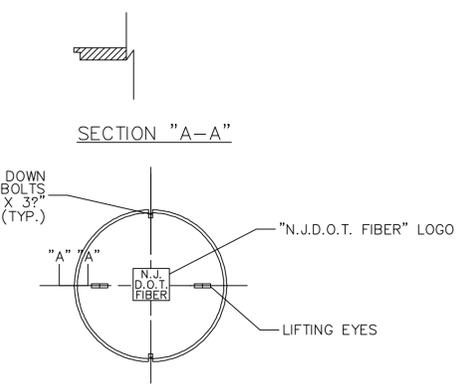


FIBER OPTIC CABLE TAG

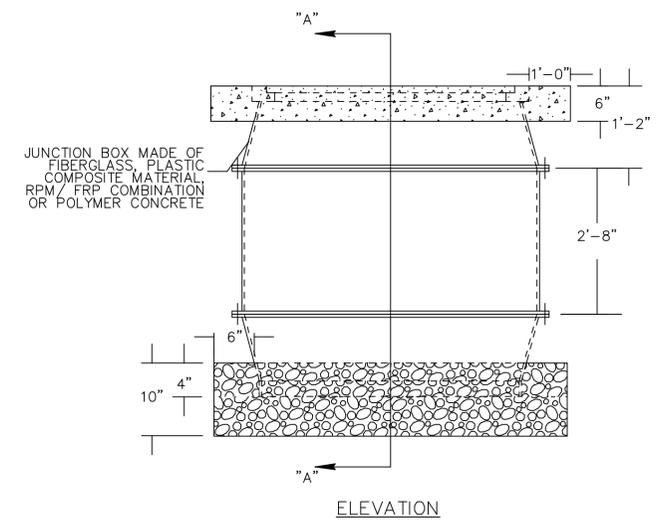
FIBER OPTIC WARNING TAPE, MARKER AND TAG



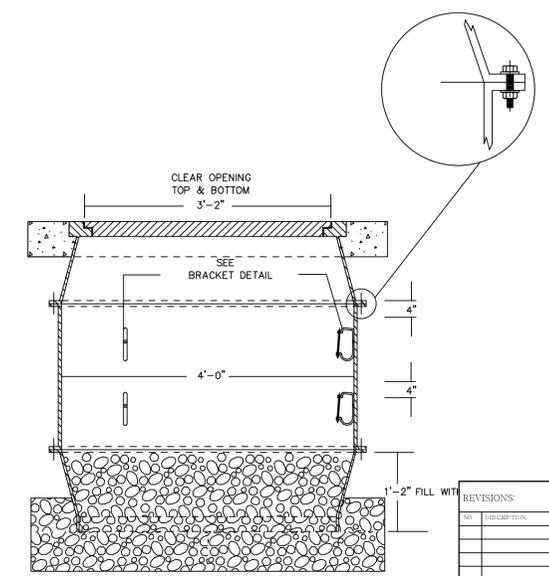
(6) CABLE BRACKETS (STAINLESS STEEL)



POLYMER CONCRETE COVER



ELEVATION



SECTION "A-A"

JUNCTION BOX ITS, TYPE A

DO NOT INSTALL THIS BOX IN THE TRAVEL WAY AND SHOULDERS.

NOTES:

1. AS A MINIMUM, DESIGN THE BOX ASSEMBLY FOR TIER 22 LOADING AS SPECIFIED IN ANSI / SCTE 77 2002 "SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY".
2. PROVIDE CERTIFICATION BY A PROFESSIONAL ENGINEER AND INCLUDE TEST RESULTS SHOWING THAT THE JUNCTION BOX COVER AND COVER DESIGN MEETS THE LOADING REQUIREMENT.
3. DESIGN THE JUNCTION BOX WITH A MINIMUM SAFETY FACTOR OF 2.0 FOR WHEEL LOADS AND 2.0 FOR SOIL LOADS, SO THAT THE COVER DEFLECTION AT DESIGN LOADS DOES NOT EXCEED 0.5 INCHES AND SIDE WALL DEFLECTION DOES NOT EXCEED 0.25 INCHES PER FOOT OF HEIGHT OF BOX. PERFORM TESTING ACCORDING TO CURRENT WESTERN UNDERGROUND COMMITTEE GUIDE NO. 3.6 NON-CONCRETE ENCLOSURE.
4. ENSURE ANY POINT ON THE COVER OR BOX WITHSTANDS A 70 FT. LBS. IMPACT ADMINISTERED WITH A C-TUP ACCORDING TO ASTM D-2444.
5. ENSURE THE MATERIALS UTILIZED IN THE MANUFACTURE OF JUNCTION BOXES AND COVERS ARE RESISTANT TO CHEMICALS COMMONLY FOUND IN THE SOIL OR IN THE OPERATING ENVIRONMENT, AND THEY ARE ALSO RESISTANT TO SUNLIGHT, UV AND ANY CLIMATIC CONDITIONS IN ACCORDANCE WITH ASTM G53, -40°F TO +140°F. DETERMINE CHEMICAL RESISTANCE PROPERTIES USING ASTM D543 AND ASTM D570 FOR WATER ABSORPTION.
6. ENSURE THE MATERIALS ARE RESISTANT TO DIRECT FLAME AND HEAT IN ACCORDANCE WITH ASTM D635.
7. ENSURE ALL HARDWARE IS STAINLESS STEEL.
8. MOUNT THREE PAIRS OF CABLE BRACKETS AT 120 DEGREES APART.
9. FASTEN EACH CABLE BRACKET WITH A 2" DIA. X 1/2" LONG BOLT AND (1) HEX NUT, (2) FLAT WASHERS.
10. FACTORY ASSEMBLE THE JUNCTION BOX AND USE SILICON CAULKING FOR ALL FLANGE JOINTS.
11. ENSURE THE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5.
12. PERMANENTLY MOLD IDENTIFICATION OF THE COVER ON THE TOP SURFACE WITH "N.J.D.O.T. FIBER".
13. ENSURE THE COLOR OF THE COVER AND THE PART OF THE BOX THAT REMAINS VISIBLE AFTER INSTALLATION IS "CONCRETE GREY".
14. SET THE TOP OF THE POLYMER CONCRETE COVER FLUSH WITH THE TOP OF THE JUNCTION BOX AT GRADE.
15. PROVIDE AND INSTALL CONCRETE LOCK-IN FEATURE AROUND THE TOP OF THE BOX.
16. LIMIT THE GAP FROM THE EDGE OF THE COVER TO THE INSIDE EDGE OF THE BOX TO A MAXIMUM OF 2" +/- 2".
17. AS AN ALTERNATE, A SINGLE SECTION OR TWO SECTION JUNCTION BOX MAY BE SUPPLIED.
18. VIBRATE AND COMPACT SOIL THOROUGHLY AROUND ENTIRE JB UP TO GRADE PER SECTION 203.03.02D OF NJDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION 2007.
19. TERMINATE RIGID NON-METALLIC CONDUITS WITH BELL END FLUSH WITH THE INSIDE WALL OF THE JUNCTION BOX.
20. TERMINATE FLEXIBLE NON-METALLIC CONDUIT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND MANUFACTURER'S REQUIREMENTS. LAY FNMC ON THE GRAVEL/BROKEN STONE IN JB. EXTEND CONDUIT ENDS 4" PAST THE INSIDE WALL OF THE JB.
21. ENSURE CONDUITS ENTER INTO THE JUNCTION BOX PERPENDICULAR TO WALLS OR AS APPROVED BY THE RE.
22. INSTALL A CONCRETE COLLAR AROUND THE TOP OF THE JUNCTION BOX OF CLASS "C" CONCRETE 6" THICK.
23. FIELD DRILL ALL CONDUIT ENTRANCES INTO THE JUNCTION BOX WITH A HOLE SAW, OR PUNCH OUT USING A HYDRAULIC HOLE PUNCH, UNLESS OTHERWISE DIRECTED BY THE RE.
24. SAND ALL CONDUIT OPENINGS. AFTER THE CONDUITS ARE INSTALLED, SEAL ALL CONDUIT ENTRANCES WITH AN EPOXY OR SILICON CAULK.
25. PROVIDE AND INSTALL PROTECTIVE COVER WITH THE BOLT ASSEMBLY.
26. PROVIDE AND INSTALL COMPACTED 2" GRAVEL OR BROKEN STONE.
27. PROVIDE AND INSTALL GROUNDING ROD (NOT SHOWN) AS PER NEC.

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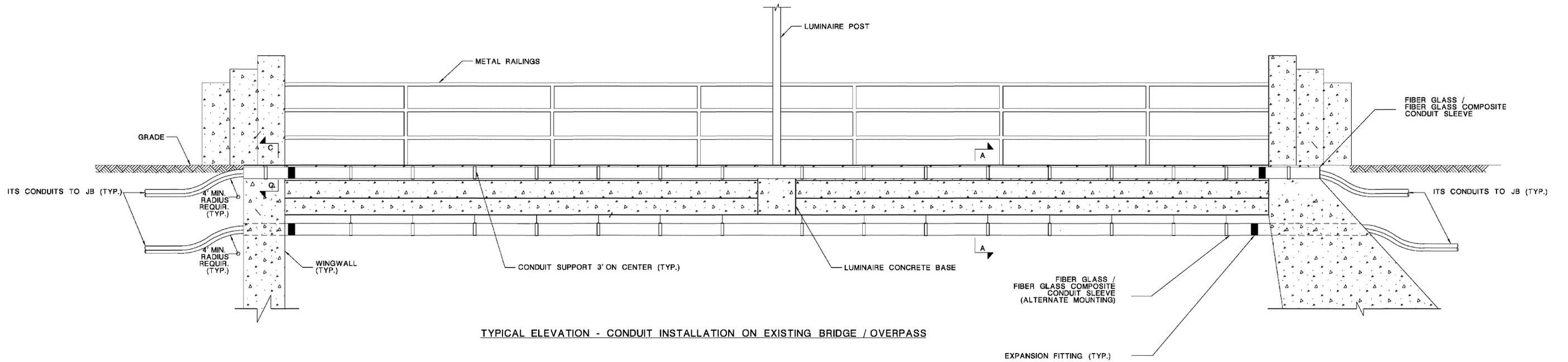
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ITS DETAILS -2-
 SCALE: N.T.S. NIMC PROJECT: FIBER OPTIC LINK SHEET #: 18 OF 22



TYPICAL ELEVATION - CONDUIT INSTALLATION ON EXISTING BRIDGE / OVERPASS

GALVANIZED C-CHANNEL STRUT, 12 GA.
(INSTALL SUPPORT AND CLAMP AT 3' O.C.)

GALVANIZED CONDUIT CLAMP WITH CUSHION, NUT & BOLT
(VIBRATION DAMPING) (TYP.)

ITS CONDUITS (TYP.)

CONDUIT SLEEVE

TRACER WIRE

SECTION C-C

CONCRETE SET BOLTS $\frac{3}{8}$ " X 3" (TYP.)

CONCRETE WALL

PARAPET RAIL

CONDUIT SLEEVE

TRACER WIRE

GALVANIZED CONDUIT CLAMP WITH CUSHION, NUT & BOLT (VIBRATION DAMPING) (TYP.)

ITS CONDUITS (TYP.)

GALVANIZED C-CHANNEL STRUT, 12 GA. (INSTALL SUPPORT AND CLAMP AT 3' O.C.) (TYP.)

NOTES:

1. PROVIDE CONDUIT EXPANSION FITTINGS AT EXISTING STRUCTURE EXPANSION JOINTS.
2. ALTERNATE MOUNTING ON UNDERSIDE OF PARAPET MAY BE PERMITTED WHEN IT IS NECESSARY TO CORE DRILL THROUGH WING WALL IN LIEU OF ABUTMENT WALL. SEAL ALL WING WALL PENETRATIONS WITH EPOXY AROUND CONDUIT.
3. SURVEY EACH STRUCTURE AND SUBMIT SHOP DRAWINGS OF CONDUIT ATTACHMENT DETAILS ALONG WITH MANUFACTURERS RECOMMENDED EXPANSION FITTINGS FOR APPROVAL.
4. IF THERE IS AN EXISTING BRIDGE APPROACH SLAB IN THE SHOULDER AT THE LOCATION OF THE PROPOSED CONDUIT, INSTALL THE CONDUIT BENEATH THE APPROACH SLAB AFTER CORING THROUGH THE BACK WALL. ENSURE THE EXISTING APPROACH SLAB IS NOT DISTURBED.
5. ENSURE THE CONCRETE SET BOLT MATERIAL CONFORMS TO ASTM B-693 AND IS MADE OF ZINC PLATED STEEL. ENSURE THE SET BOLT CHARACTERISTICS CONFORMS TO GSA SPECIFICATION FF S-325, GROUP VII, TYPE 2.
6. WHEN ALTERNATE MOUNTING IS PROPOSED TO BE USED, ENSURE THAT EXISTING UNDER CLEARANCE IS MAINTAINED.

CONDUIT SLEEVE

CONCRETE PARAPET

CONCRETE SET BOLTS $\frac{3}{8}$ " X 3" (TYP.)

GALVANIZED CONDUIT CLAMP WITH CUSHION, NUT & BOLT (VIBRATION DAMPING) (TYP.)

SECTION B-B

GALVANIZED C-CHANNEL STRUT, 12 GA. (INSTALL SUPPORT AND CLAMP AT 3' O.C.)

ITS CONDUITS (TYP.)

CONCRETE SET BOLTS $\frac{3}{8}$ " X 3" (TYP.)

SECTION A-A

ALTERNATE MOUNTING

TRACER WIRE

CONDUIT SLEEVE

ITS CONDUITS (TYP.)

GALVANIZED CONDUIT CLAMP WITH CUSHION, NUT & BOLT (VIBRATION DAMPING) (TYP.)

NOT TO SCALE

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ITS DETAILS -3-

SCALE: N.T.S. NJMC PROJECT: FIBER OPTIC LINK SHEET #: 19 OF 22

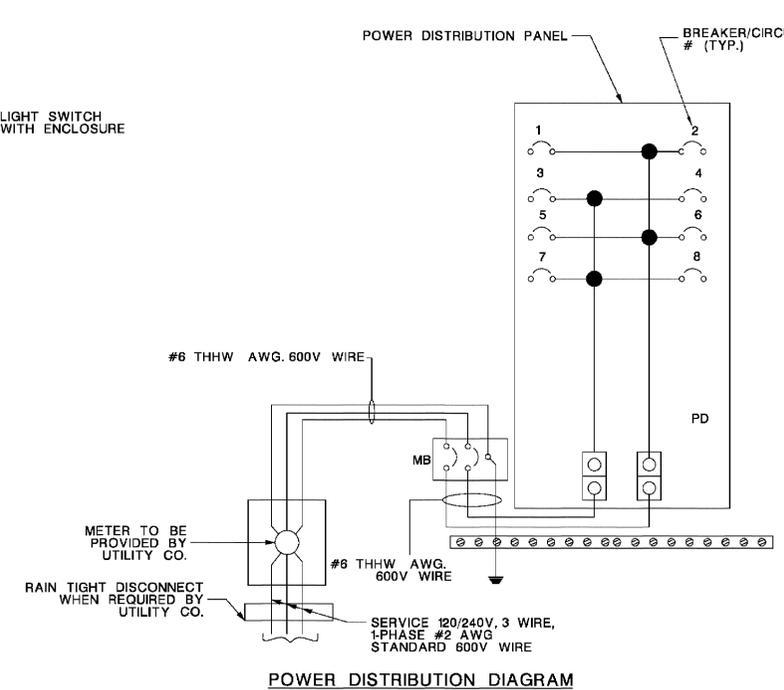
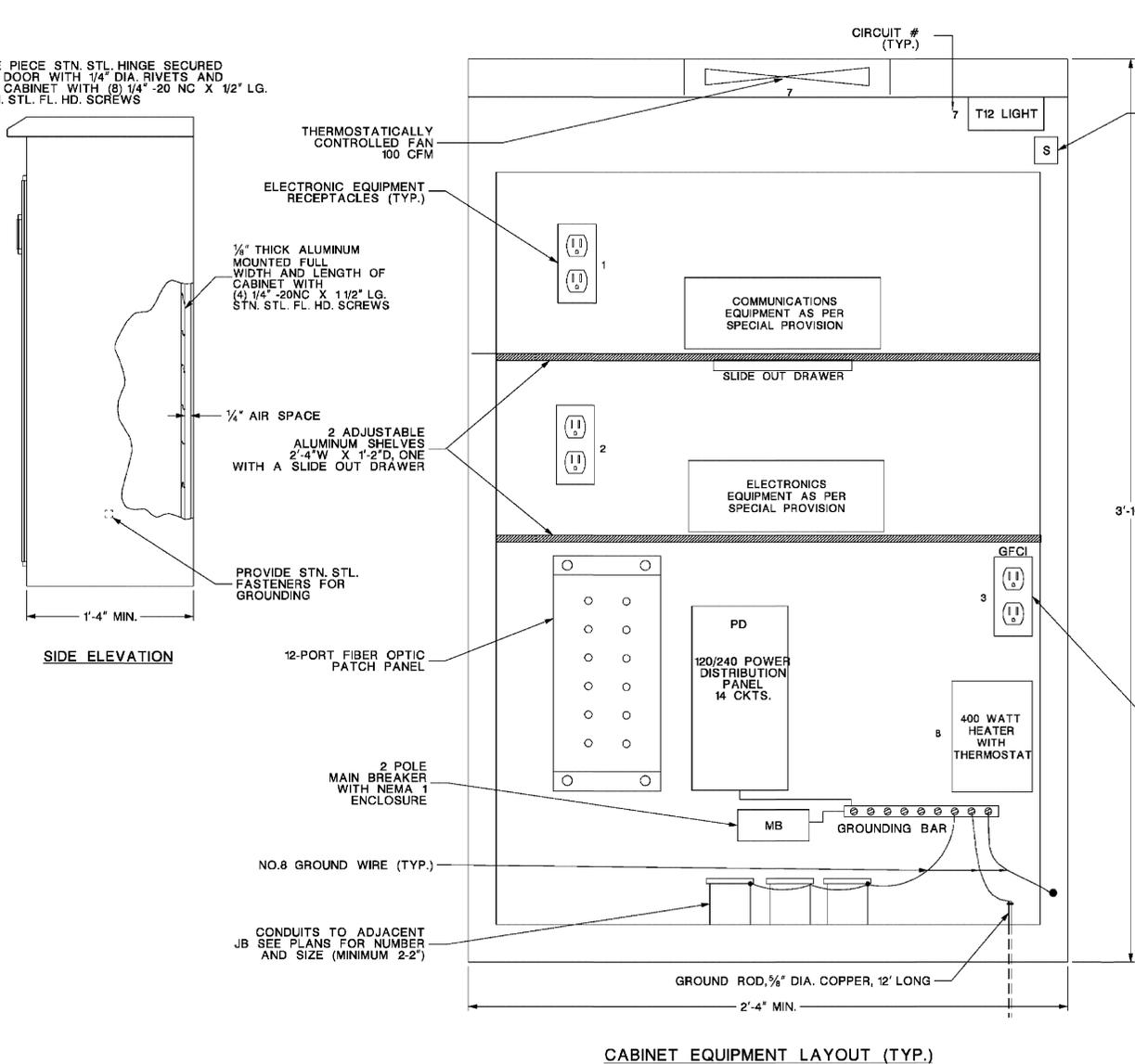
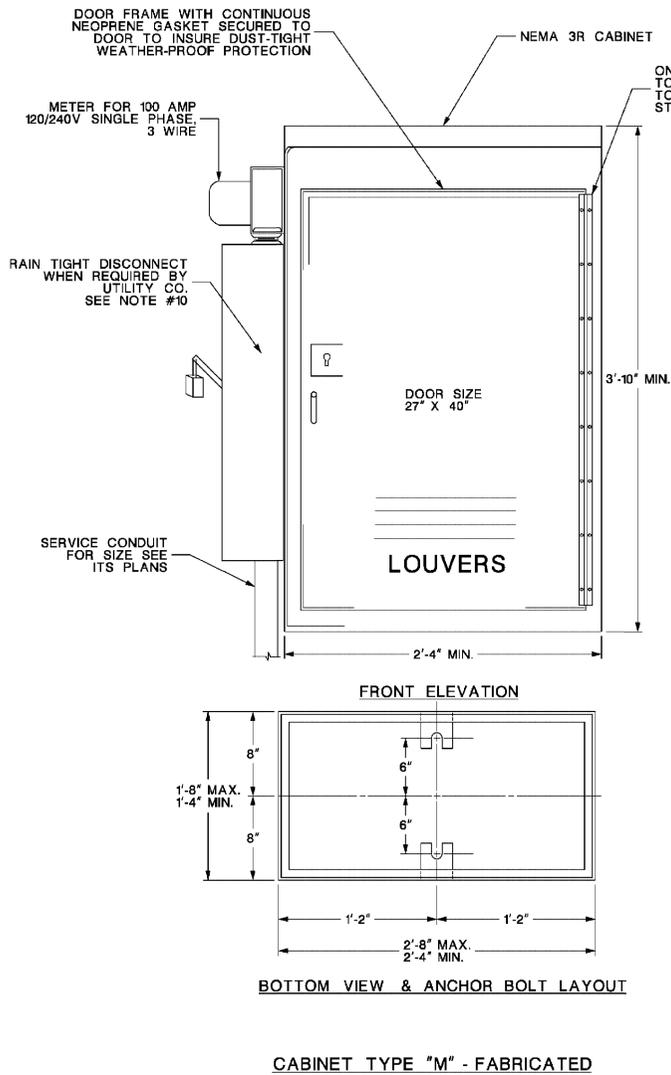
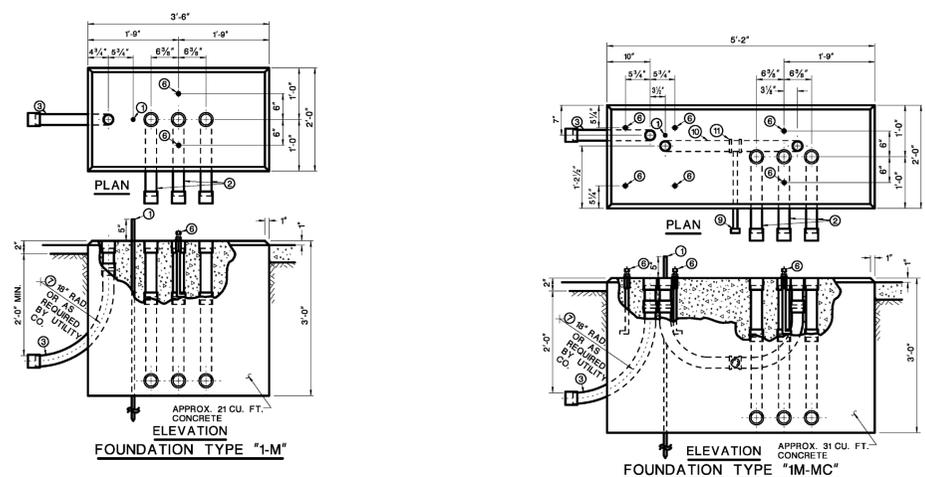


TABLE A

BREAKERS #	BREAKER RATING FUNCTION	TRIP RATING (AMPS)
MB	MAIN BREAKER 60 AMP	60
1	ELECTRONIC EQUIPMENT RECEPTACLE	15
2	ELECTRONIC EQUIPMENT RECEPTACLE	15
3	CONVENIENCE RECEPTACLE (GFCI)	15
4	SPARE	15
5	SPARE	15
6	SPARE	15
7	FAN & LIGHT	15
8	HEATER	20

- NOTES:**
- ENSURE CABINET AND CABINET DOOR IS FABRICATED FROM SHEET ALUMINUM 1/8" THICK, 5052-H32 ALLOY, UNPAINTED.
 - SUPPLY WITH EACH CABINET (2) ANCHOR BOLTS 3/4" - 10NC X 15" LG. STL. WITH GALVANIZED 3" COUPLING (2) STAINLESS STEEL 1 1/2" O.D. X 1/2" THK. FLAT WASHERS AND (2) 3/4" - 10NC X 3" LG. STAINLESS STEEL CAP SCR.
 - SECURE CABINET DOOR WITH A SUB-TREASURY LOCK NO. 0357S AND KEYPAD ALIKE FOR KEY NO. 5 AVAILABLE FROM THE AMERICAN HARDWARE CO. NEW BRITAIN, CONN. OR A TUMBLER LOCK NO. 15481 ARS AND KEYPAD ALIKE FOR NO. 2 AVAILABLE FROM CORBIN LOCK CO. NEW BRITAIN, CONN.
 - SECURE CABINET LOCK TO THE DOOR WITH #10 - 24 X 1 1/8" ROUND HEAD (STN. STL.) MACHINE SCREWS.
 - 120V EXPOSED WIRING IS NOT PERMITTED. ENCASE WIRING TO ENCLOSURES AND OUTLETS IN LIQUID TIGHT FLEXIBLE CONDUIT AND FITTINGS INSIDE THE CABINET.
 - ENSURE ALL EQUIPMENT IS UL & NEMA LISTED FOR OUTDOOR INSTALLATION INSIDE NEMA 3R CABINET.
 - LABEL ALL ELECTRICAL RECEPTACLES EXCEPT GFCI AS "ELECTRONIC EQUIPMENT ONLY", AND GFCI RECEPTACLE AS "CONVENIENCE RECEPTACLE".
 - FOR BREAKER RATINGS, SEE TABLE A.
 - PROVIDE SURGE SUPPRESSION.
 - METER, RAIN TIGHT DISCONNECT SWITCH AND SERVICE CONDUIT ARE NOT REQUIRED IF ELECTRIC SERVICE IS CONNECTED TO ANOTHER LOAD CENTER AND NOT TO UTILITY COMPANY POWER SOURCE.
 - WHERE REQUIRED, ENSURE METER PAN CONFORMS TO UTILITY COMPANY'S HEIGHT REQUIREMENTS.



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