

UPPER MERION TOWNSHIP MONTGOMERY COUNTY, PA

250 0 250 500

SCALE IN FEET

EXISTING OFFICE - GROSS FLOOR AREA	
170 S. WARNER ROAD	89,181 SF
190 S. WARNER ROAD	89,016 SF
PROPOSED OFFICE - GROSS FLOOR AREA	
180 S. WARNER ROAD	<u>82,630 SF</u>
TOTAL OFFICE GROSS FLOOR AREA	260,827 SF

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2/19/2008 7:49:25 AM steve_lepera

ON THIS _____ DAY OF _____, 2009, BEFORE ME, _____
 THE UNDERSIGNED OFFICER, PERSONALLY APPEARED MR. ROBERT SEKOLA
 WHO ACKNOWLEDGED HIMSELF TO BE THE VICE PRESIDENT OF
 LIBERTY PROPERTY TRUST, AND THAT HE, AS SUCH OFFICER, BEING AUTHORIZED
 TO DO SO, EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES THEREIN
 CONTAINED BY SIGNING THE NAME OF THE CORPORATION BY HIMSELF, AS
 VICE PRESIDENT. IN WITNESS WHEREOF, I HAVE HEREUNTO
 SET MY HAND AND OFFICIAL SEAL.

MY COMMISSION EXPIRES: _____

I HEREBY CERTIFY THAT THIS PLAN REPRESENTS A FIELD SURVEY MADE BY ME, THAT THE MONUMENTS SHOWN HEREON EXIST AS LOCATED, AND THAT ALL DIMENSIONAL DETAILS ARE CORRECT.

DATE _____ DAVID A. LINDSAY
P.L.S. SU-42007-1

UPPER MERION TOWNSHIP BOARD OF SUPERVISORS
APPROVED BY THE BOARD OF SUPERVISORS OF UPPER MERION
TOWNSHIP ON THIS _____ DAY OF _____, 2009.

SECRETARY

APPROVED BY THE TOWNSHIP ENGINEER
ON THIS _____ DAY OF _____, 2009.

RECORDED ON THIS _____ DAY OF _____,
2009, IN THE OFFICE FOR THE RECORDING OF DEEDS,
IN AND FOR THE COUNTY OF MONTGOMERY OF NORRISTOWN,
PENNSYLVANIA IN PLAN BOOK _____, PAGE NUMBER _____

RECORDED

PARCEL 1	DEED AREA	4.361 ACRES
PARCEL 1	LEGAL R/W AREA	0.170 ACRE
PARCEL 1	NET AREA	4.191 ACRES
PARCEL 2	NET AREA	1.531 ACRES
PARCEL 3	NET AREA	2.783 ACRES
PARCEL 4	NET AREA	1.306 ACRES

TOTAL CONSOLIDATED NET AREA	9.811 ACRES
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MULTI-TENANT OFFICE BUILDING
SM-1 - SUBURBAN METROPOLITAN

REGULATION		REQUIRED	PARCELS
MINIMUM	LOT AREA	1 AC.	9.811 AC.
MINIMUM	FRONT YARD	40'	40'
MINIMUM	SIDE YARD	15', 40' AGGR.	64.39'
MINIMUM	REAR YARD	20'	54.74'
MAXIMUM	BUILDING COVERAGE	50%	10.7%
MAXIMUM	BUILDING HEIGHT	50'	47.25'

TAX MAP BLOCK
TAX PARCEL #58-00-06426-005
#58-00-06426-014
#58-00-06426-023

(A) THIS AREA SUBJECT TO RESERVATIONS, CONDITIONS AND RESTRICTIONS GRANTED TO PECO ENERGY COMPANY IN DEED BOOK 4412, PAGES 443 & 447.

PENNSYLVANIA DEPARTMENT
OF TRANSPORTATION
7000 GEERDES BLVD
KING OF PRUSSIA, PA

0° 03' 12"

MATCH LINE SEE SHEET 3

NOTES

OUTBOUND DESCRIPTION BASED ON DEED BOOK 5100, PAGE 0024,
DEED BOOK 4422, PAGE 0037, DEED BOOK 4658, PAGE 1996,
DEED BOOK 4886, PAGE 2045, DEED BOOK 5524, PAGE 2978,
DEED BOOK 5524, PAGE 2978 PENNSYLVANIA DEPARTMENT OF
TRANSPORTATION PLANS OF STATE ROUTE 0202, SECTION
403 R/W AND FIELD VERIFIED BY ACTUAL FIELD SURVEY
PERFORMED DURING MAY 2005.

BUILDING, DRIVE, ROAD AND PARKING LOCATIONS FROM ACTUAL FIELD SURVEY PERFORMED DURING APRIL 2006

THIS PLAN IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR

REFERENCE PLANS:

SUBDIVISION PLAN PREPARED BY HOPKINS AND SCOTT, INC., DATED 8/01/1983, RECORDED IN PLAN BOOK A-45, PAGE 187 IN THE MONTGOMERY COUNTY RECORDER OF DEEDS OFFICE.

ALTA/ACSM LAND TITLE SURVEY OF 170-190 WARNER ROAD, PREPARED BY
HOPKINS AND SCOTT, INC., DATED 6/26/1995.

SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS PART OF THIS SURVEY.

50 0
SCALE IN FEET

PREPARED BY:
URS
FORT WASHINGTON, PA

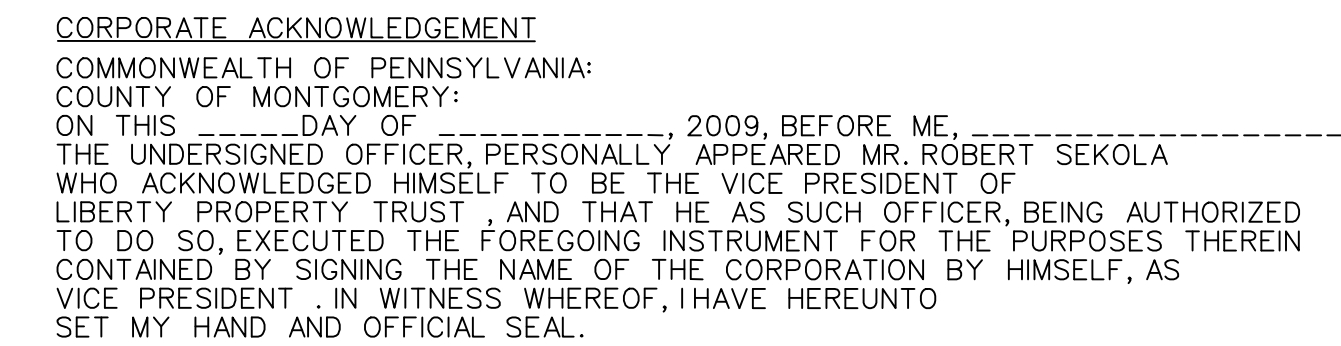
BUILDING SETBACK _____
LINE

PENNDOT DRAINAGE
EASEMENT AREA

INDICATES PROPERTY LINE
DIMENSION TO BE DELETED

[illegible]

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2/19/2008 8:05:59 AM steve_lepera



MY COMMISSION EXPIRES: _____

RECORDER _____

BEGINNING AT A POINT SAID JOINT BEING MEASURED THE TWO (2) FOLLOWING COURSES AND DISTANCES FROM A POINT IN THE TITLE LINE OF WARNER ROAD (T-502): (1) N69°44'40"E, A DISTANCE OF 665.76 FEET TO A POINT, (2) N69°45'40"W, A DISTANCE OF 134.48 TO A POINT ON THE LEGAL RIGHT-OF-WAY LINE OF CONTINENTAL ROAD (T-501) THE POINT AND PLACE OF BEGINNING; THENCE FROM SAID POINT OF BEGINNING ALONG LANDS NOW OR LATE OF CONTINENTAL SQUARE ASSOCIATES, L.P. THE TWO (2) FOLLOWING COURSES AND DISTANCES: (1) N69°45'40"E, A DISTANCE OF 524.00 FEET, TO A CONCRETE MONUMENT FOUND, (2) N36°37'40"W, A DISTANCE OF 584.27 FEET, TO A POINT ON THE LEGAL RIGHT-OF-WAY LINE FOR LIMITED ACCESS OF S.R. 0202, SECTION 403; THENCE ALONG SAID LEGAL RIGHT-OF-WAY FOR LIMITED ACCESS LINE OF S.R. 0202, SECTION 403 THE FOUR (4) FOLLOWING COURSES AND DISTANCES: (1) N75°49'41"E, A DISTANCE OF 8.26 FEET, TO A POINT (2) S82°41'40"E, A DISTANCE OF 78.65 FEET, TO A POINT, (3) N69°21'51"E, A DISTANCE OF 463.20 FEET, TO A POINT, (4) S20°38'09"E, A DISTANCE OF 245.68 FEET, TO A POINT ON THE LEGAL RIGHT-OF-WAY LINE FOR LIMITED ACCESS OF S.R. 0076; THENCE ALONG SAID LEGAL RIGHT-OF-WAY LINE FOR LIMITED ACCESS OF S.R. 0076 THE FIVE (5) FOLLOWING COURSES AND DISTANCES, (1) S82°41'40"E, A DISTANCE OF 607.38, TO A CONCRETE MONUMENT FOUND, (2) N69°53'50"E, A DISTANCE OF 68.89 FEET, TO A POINT, (3) ALONG A LINE CURVING TO THE LEFT, WITH A RADIUS OF 622.96 FEET, THE ARC DISTANCE OF 137.33 FEET, WITH A CHORD BEARING OF N81°20'33"E, THE CHORD DISTANCE OF 137.05 FEET, TO A POINT, (4) N75°49'41"E, A DISTANCE OF 8.27 FEET, TO A POINT, (5) ALONG A LINE CURVING TO THE RIGHT, WITH A RADIUS OF 522.96 FEET, THE ARC DISTANCE OF 99.85 FEET, WITH A CHORD BEARING OF N81°27'35"E, THE CHORD DISTANCE OF 99.70 FEET, TO A POINT, IN LINE OF LANDS OF PECO ENERGY COMPANY; THENCE ALONG SAID LANDS S69°45'40"W, A DISTANCE OF 1,827.22 FEET TO A POINT, ON THE LEGAL RIGHT-OF-WAY LINE FOR LIMITED ACCESS OF S.R. 6202 (RAMP "L"); THENCE ALONG SAID LEGAL RIGHT-OF-WAY LINE FOR LIMITED ACCESS OF S.R. 6202 (RAMP "L") ALONG A LINE CURVING TO THE LEFT, WITH A RADIUS OF 1900.00 FEET, THE ARC DISTANCE OF 88.01 FEET, WITH A CHORD BEARING S82°08'50"W, THE CHORD DISTANCE OF 88.01 FEET, TO A POINT ON THE LEGAL RIGHT-OF-WAY LINE OF CONTINENTAL ROAD (T-501), AFORESAID; THENCE ALONG SAID LEGAL RIGHT-OF-WAY LINE OF CONTINENTAL ROAD (T-501) N28°39'32"W, A DISTANCE OF 47.63 FEET, TO THE POINT AND PLACE OF BEGINNING

50 0 50

SCALE IN FEET

TOTAL CONSOLIDATED NET AREA 9.811 ACRES

* INDICATES PROPERTY LINE
DIMENSION TO BE DELETED

LEGEND

- 175-- EXISTING CONTOUR
x 185.00 EXISTING SPOT ELEVATION
⊙ EXISTING DRAINAGE STRUCTURE ID
..... BOUNDARY OF STEEP SLOPE AREA
--- BOUNDARY OF SIGNIFICANT SLOPE AREA
2" RED MAPLE ⊗ TREE TO BE REMOVED

STEEP SLOPE CALCULATIONS:

AVERAGE SLOPE, S = $\frac{0.0023}{A} \times 2 \times L = 6.19\%$

WHERE: A = COMBINED LOT AREA, INCLUDING LEASE AREAS = 19,452 AC.
L = LENGTH OF ALL CONTOUR LINES THROUGH LOT = 26,196 FT.
2 = CONTOUR INTERVAL, FT.

TOTAL STEEP SLOPE AREAS (STEEPER THAN 15%) = 4548 SF

STEEP SLOPE AREAS TO BE REGRADED = 1019 SF
PERCENTAGE OF REGRAIDING = 22.4%

TOTAL SIGNIFICANT SLOPE AREAS (STEEPER THAN 25%) = 10,104 SF

SIGNIFICANT SLOPE AREAS TO BE REGRADED = 3224 SF
PERCENTAGE OF REGRAIDING = 31.9%

BM-1
ELEV 206.31
170 SOUTH WARNER RD
ELEVATION AT SOUTH DOOR SILL

NOTES

UTILITIES ARE PLOTTED FROM FIELD EVIDENCE AND LIMITED UTILITY MAPPING. URS HAS NOT SURVEYED THE UNDERGROUND UTILITIES. THE COMPLETNESS OR ACCURACY OF THE UTILITY LOCATIONS IS NOT GUARANTEED. THE CONTRACTOR MUST VERIFY LOCATIONS AND DEPTHS OF ALL UTILITIES PRIOR TO THE START OF WORK.

OUTBOUND DESCRIPTION BASED ON DEED BOOK 5100, PAGE 0024, DEED BOOK 4422, PAGE 0037, DEED BOOK 4658, PAGE 1996, DEED BOOK 4886, PAGE 2045, DEED BOOK 5524, PAGE 2978, DEED BOOK 5524, PAGE 2978 PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PLANS OF STATE ROUTE 0202, SECTION 403 R/W AND FIELD VERIFIED BY ACTUAL FIELD SURVEY PERFORMED DURING MAY 2005.

BUILDING, DRIVE, ROAD AND PARKING LOCATIONS FROM ACTUAL FIELD SURVEY PERFORMED DURING APRIL 2006

THIS PLAN IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.

REFERENCE PLANS:

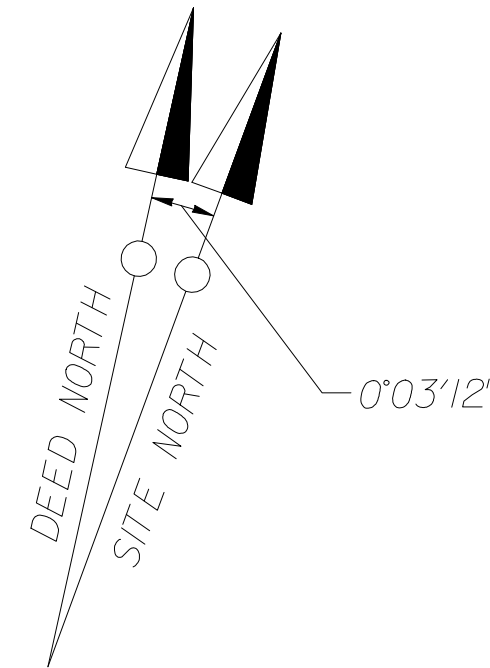
SUBDIVISION PLAN PREPARED BY HOPKINS AND SCOTT, INC., DATED 8/01/1983, RECORDED IN PLAN BOOK A-45, PAGE 187 IN THE MONTGOMERY COUNTY RECORDER OF DEEDS OFFICE.

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SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS PART OF THIS SURVEY.

N/L
CONTINENTAL SQUARE ASSOCIATES, L.P.
T.M.P. # 58-00-06427-00-4
DB: 5571, PG: 0767

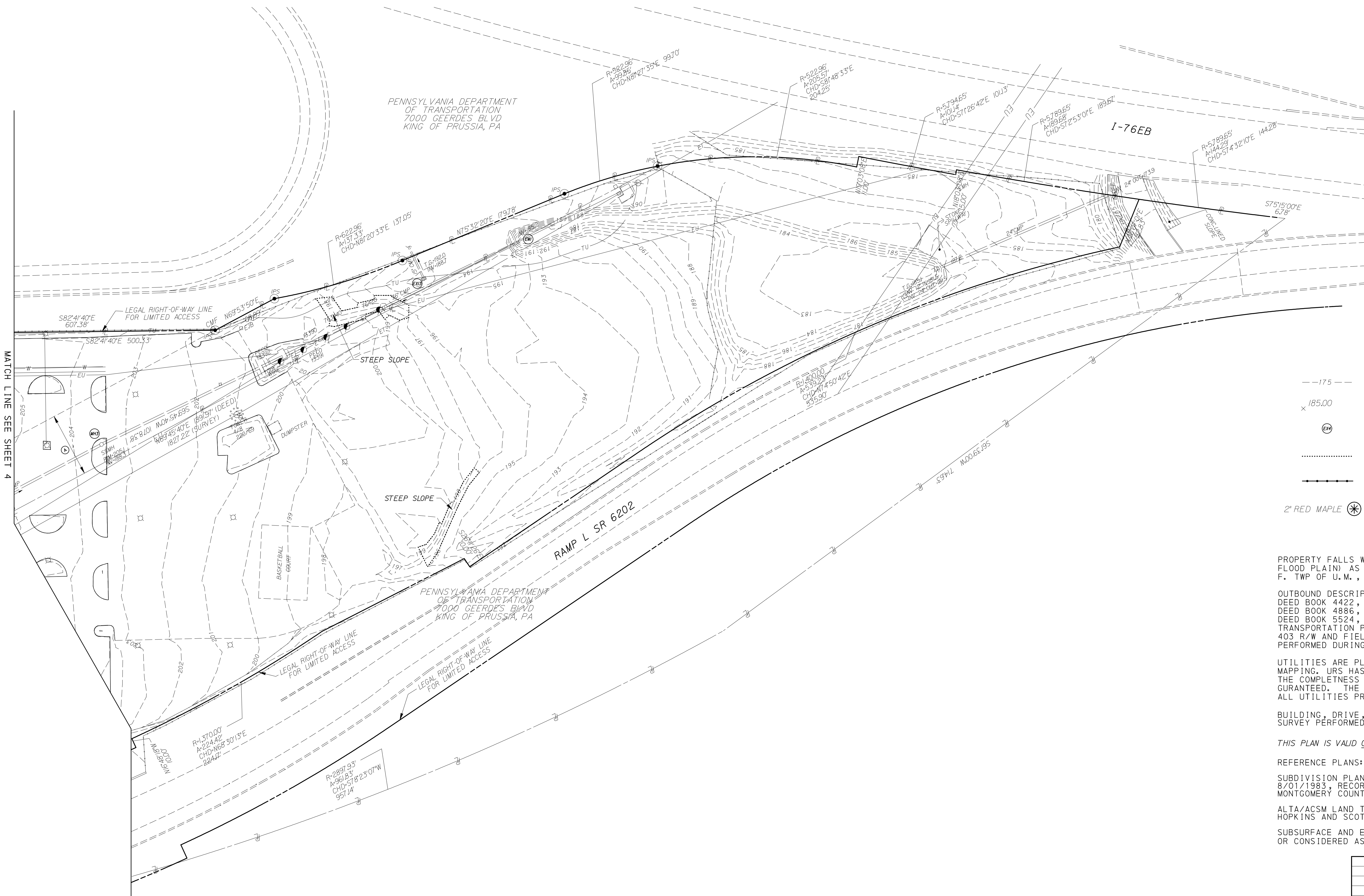
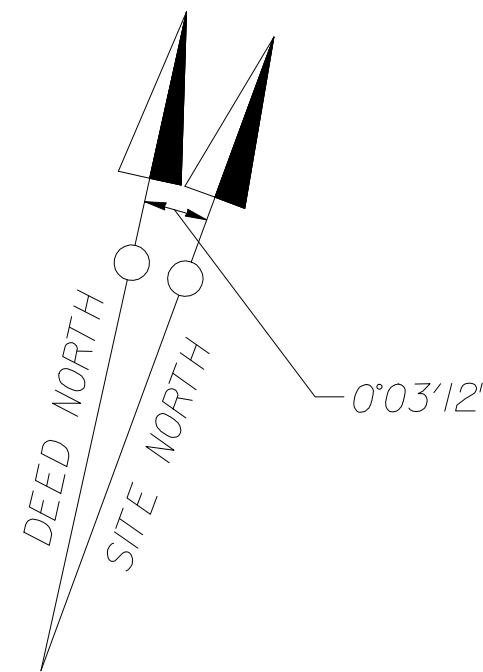
PENNSYLVANIA DEPARTMENT
OF TRANSPORTATION
7000 GEERDES BLVD
KING OF PRUSSIA, PA



MATCH LINE SEE SHEET 5

50 0 50
SCALE IN FEET
PREPARED BY:
URS
FORT WASHINGTON, PA

THIS AREA SUBJECT TO RESERVATIONS, CONDITIONS AND RESTRICTIONS
GRANTED TO PECO ENERGY COMPANY IN DEED BOOK 4412, PAGES 443 & 447.



LEGEND

- 175— EXISTING CONTOUR
- x 185.00 EXISTING SPOT ELEVATION
- (EX) EXISTING DRAINAGE STRUCTURE ID
- BOUNDARY OF STEEP SLOPE AREA
- +—+—+— BOUNDARY OF SIGNIFICANT SLOPE AREA
- 2" RED MAPLE (X) TREE TO BE REMOVED

NOTES

PROPERTY FALLS WITHIN ZONE X (AREAS OUTSIDE 500 YR FLOOD PLAIN) AS DEPICTED ON FIRM MAP NO. 42091 C0334 F. TWP OF U.M., MONT. CO., PA. DATED 8/9/99.

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BUILDING, DRIVE, ROAD AND PARKING LOCATIONS FROM ACTUAL FIELD SURVEY PERFORMED DURING APRIL 2006

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SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS PART OF THIS SURVEY.

50 0 50
SCALE IN FEET

PREPARED BY:
URS
FORT WASHINGTON, PA

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THIS AREA SUBJECT TO RESERVATIONS, CONDITIONS AND RESTRICTIONS GRANTED TO PECO ENERGY COMPANY IN DEED BOOK 4412, PAGES 443 & 447.

t:\21386989\CADD\Civil\rdwy\existing_features_plan_2.dgn
12/19/2008 8:04:36 AM Steve Lipera

NOTES:

THE CONTRACTOR MUST CONTACT THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 AT LEAST THREE WORKING DAYS PRIOR TO THE START OF EXCAVATION OR DEMOLITION WORK TO HAVE ALL UNDERGROUND UTILITIES MARKED IN THE WORK AREA. THE PA ONE-CALL SERIAL NUMBER FOR THIS PROJECT IS 33775567.

THE CONTRACTOR SHALL CAREFULLY REMOVE, STORE, AND REPLACE ALL EXISTING STOP SIGNS IN THE PARKING LOT.



LEGEND

- EXISTING NUMBER OF PARKING SPACES
- PROPOSED NUMBER OF PARKING SPACES
- PROPOSED HANDICAPPED-ACCESSIBLE PARKING SPACES
- PROPOSED VAN HANDICAPPED-ACCESSIBLE PARKING SPACES
- PROPOSED CONCRETE CURB
- BUILDING SETBACK LINE
- CURB RAMP
- PROPOSED LIGHTING FIXTURES
- PROPOSED RETAINING WALL
- PROPOSED SIDEWALK
- PROPOSED BUILDING
- WIDTH / SOLID WHITE LINE
- WIDTH / SOLID WHITE LINE
- WIDTH / DOUBLE YELLOW LINE
- WIDTH / SOLID YELLOW LINE

APPROVED BY THE BOARD OF SUPERVISORS OF UPPER MERION TOWNSHIP ON THE __ DAY OF _____, 20__.

SECRETARY CHAIRMAN

TOWNSHIP ENGINEER

RECORDED IN THE OFFICE OF RECORDER OF DEEDS IN NORRISTOWN, PA IN PLAN BOOK NO. ____ PAGE NO. ____ ON THE __ DAY OF _____, 20__.

I HEREBY CERTIFY THAT LIBERTY PROPERTY TRUST IS THE REGISTERED OWNER OF THE LAND HEREIN DEVELOPED, AND THAT WE DO HEREBY ADOPT THIS PLAN AND DESIRE THE SAME TO BE RECORDED.

CORPORATE ACKNOWLEDGEMENT

ON THE __ DAY OF _____ A.D. 2009 BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN _____ PERSONALLY APPEARED MR. ROBERT SEKOLA, WHO ACKNOWLEDGED HIMSELF TO BE THE VICE PRESIDENT OF LIBERTY PROPERTY TRUST, A CORPORATION, AND THAT AS SUCH VICE PRESIDENT BEING AUTHORIZED TO DO SO, HE EXECUTED THE FOREGOING PLAN BY SIGNING THE NAME OF THE SAID CORPORATION BY HIMSELF AS VICE PRESIDENT, THAT THE SAID CORPORATION IS THE OWNER OF THE DESIGNATED LAND, THAT ALL NECESSARY APPROVALS OF THE PLAN HAVE BEEN OBTAINED AND IS ENDORSED THEREON, AND THAT THEY DESIRE THE FOREGOING PLAN TO BE DULY RECORDED.

(SEAL) NOTARY PUBLIC

MY COMMISSION EXPIRES: _____

50 0 50
SCALE IN FEET

PREPARED BY:
URS
FORT WASHINGTON, PA

NO.	DATE	REVISIONS		
SITE LAYOUT PLAN				
LIBERTY PROPERTY TRUST				
180 SOUTH WARNER ROAD				
UPPER MERION TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA				
URS CORPORATION Consulting Engineers			PROJECT NO. 21386989	
335 Commerce Drive • Suite 300 • Fort Washington • PA • 19034-2623 (215) 367-2500 • Fax (215) 367-1000			FIELD BOOK 21386989	
SCALE AS NOTED	DATE	DRAWN BY SML	CHECKED BY	SHEET NO. 7 OF 38

MATCH LINE SEE SHEET 6

SEE SHEET 11 FOR DETAIL OF FUTURE PARKING DECK. SUBMIT PARKING DECK DESIGN SEALED BY A PROFESSIONAL ENGINEER TO UPPER MERION TWP. PRIOR TO CONSTRUCTION.

THIS AREA SUBJECT TO RESERVATIONS, CONDITIONS AND RESTRICTIONS GRANTED TO PECO ENERGY COMPANY IN DEED BOOK 4412, PAGES 443 & 447.

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12/19/2008 8:08:27 AM Steve Lipera

LEGEND

- ② EXISTING NUMBER OF PARKING SPACES
⑩ PROPOSED NUMBER OF PARKING SPACES
⑨ HC PROPOSED HANDICAPPED-ACCESSIBLE PARKING SPACES
① VHC PROPOSED VAN HANDICAPPED-ACCESSIBLE PARKING SPACES
— PROPOSED CONCRETE CURB
- - - - - BUILDING SETBACK LINE
▢ CURB RAMP
— PROPOSED LIGHTING FIXTURES
— PROPOSED RETAINING WALL
— PROPOSED INLET, PIPE AND MANHOLE
— PROPOSED CONTOUR
- - - - - EXISTING CONTOUR
— SIGNIFICANT SLOPE
- - - - - STEEP SLOPE
205.60 PROPOSED SPOT ELEVATION
205.60 P.C. TW, BW PROPOSED SPOT ELEVATION FOR BOTTOM OF CURB, TOP OF WALL, BOTTOM OF WALL
④ PROPOSED DRAINAGE STRUCTURE ID
④ EXISTING DRAINAGE STRUCTURE ID
FULL DEPTH PAVEMENT RECONSTRUCTION
FULL DEPTH PAVEMENT WIDENING
PROPOSED SIDEWALK
PROPOSED BUILDING
PROPOSED ROCK LINING

STEEP SLOPE CALCULATIONS:

AVERAGE SLOPE, $S = \frac{0.0023}{A} \times 2 \times L = 6.19\%$

WHERE: A = COMBINED LOT AREA, INCLUDING LEASE AREAS = 19,452 AC.
L = LENGTH OF ALL CONTOUR LINES THROUGH LOT = 26,196 FT.
2 = CONTOUR INTERVAL, FT.

TOTAL STEEP SLOPE AREAS (STEEPER THAN 15%) = 4548 SF

STEEP SLOPE AREAS TO BE REGRADED = 1019 SF
PERCENTAGE OF REGRADED = 22.4%

TOTAL SIGNIFICANT SLOPE AREAS (STEEPER THAN 25%) = 10,104 SF

SIGNIFICANT SLOPE AREAS TO BE REGRADED = 3224 SF
PERCENTAGE OF REGRADED = 31.9%

NOTES:

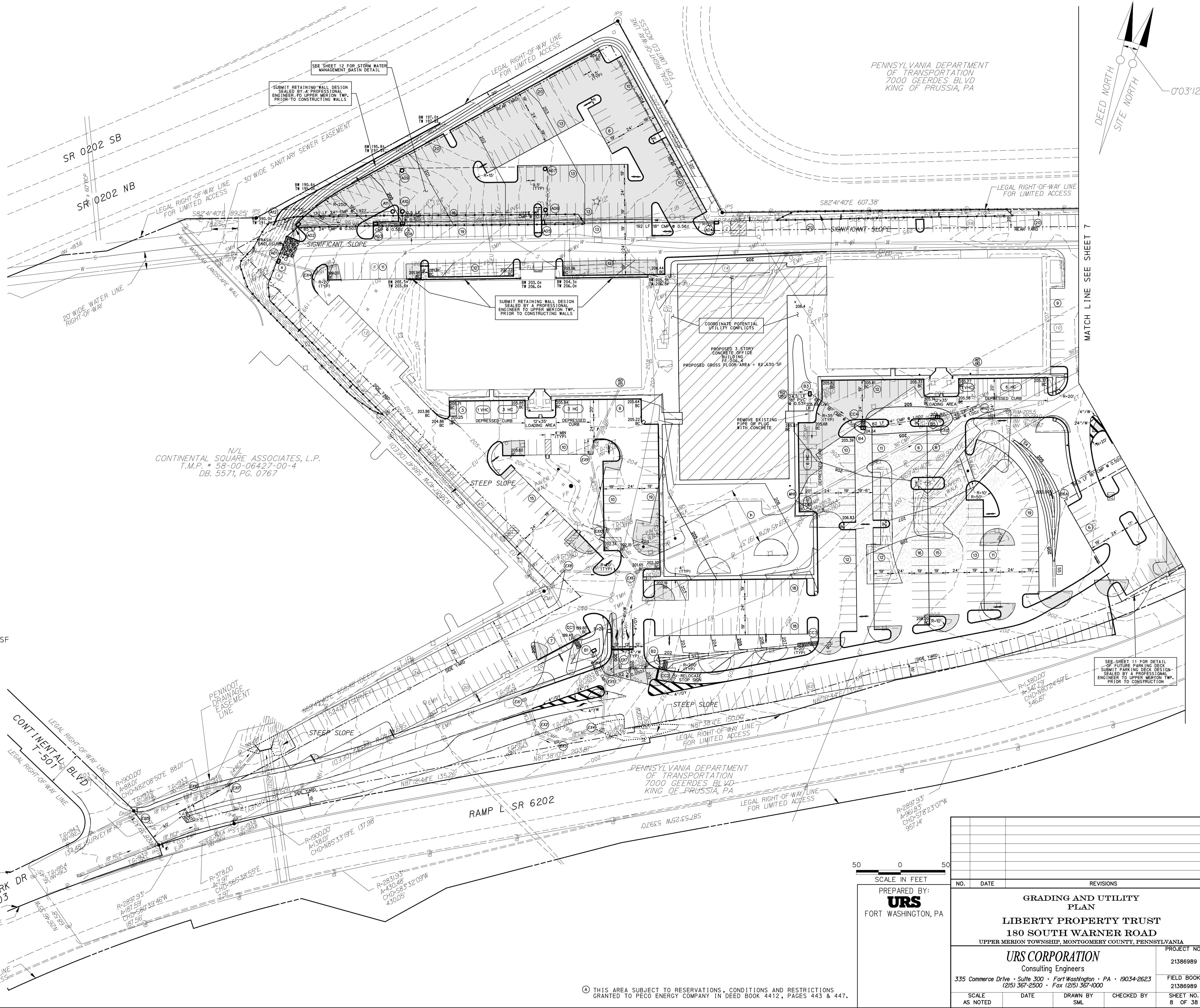
PROPERTY FALLS WITHIN ZONE X (AREAS OUTSIDE 500 YR FLOOD PLAIN) AS DEPICTED ON FIRM MAP NO. 42091 C0334 F. TOWNSHIP OF UPPER MERION, MONTGOMERY COUNTY, PA. DATED 8/9/99.

THE CONTRACTOR MUST CONTACT THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 AT LEAST THREE WORKING DAYS PRIOR TO THE START OF EXCAVATION OR DEMOLITION WORK TO HAVE ALL UNDERGROUND UTILITIES MARKED IN THE WORK AREA. THE PA ONE-CALL SERIAL NUMBER FOR THIS PROJECT IS 3375567.

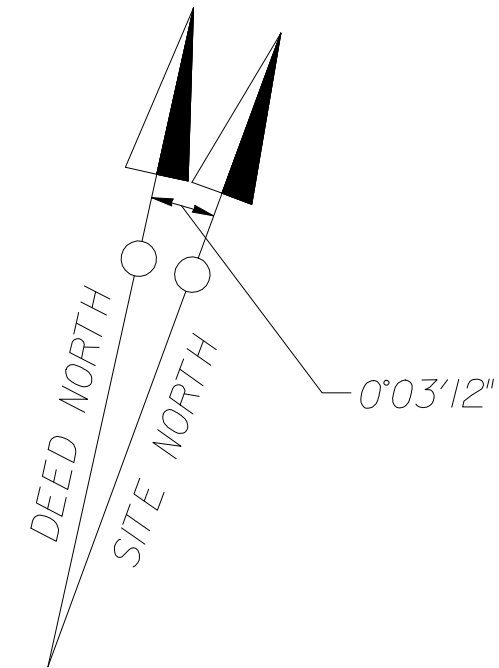
THE CONTRACTOR SHALL CAREFULLY REMOVE, STORE, AND REPLACE ALL EXISTING STOP SIGNS IN THE PARKING LOT.

COORDINATE NEW BUILDING ELECTRICAL SERVICE WITH PECO
COORDINATE NEW BUILDING WATER SERVICE WITH AQUA PA
COORDINATE NEW BUILDING SANITARY SEWER SERVICE WITH UPPER MERION TOWNSHIP SEWER AUTHORITY

THE PROPERTY OWNER SHALL HAVE THE RESPONSIBILITY FOR THE PERPETUAL MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT FACILITIES. NO CHANGES SHALL BE MADE TO THE STORMWATER MANAGEMENT FACILITIES OR FINISH GRADING WITHOUT PRIOR WRITTEN APPROVAL FROM THE TOWNSHIP. THE TOWNSHIP HAS THE RIGHT, BUT NOT THE OBLIGATION, TO ENTER THE PROPERTY TO PERFORM ANY REQUIRED MAINTENANCE WHICH HAS NOT BEEN PROPERLY PERFORMED IN A TIMELY MANNER. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE COST OF ANY MAINTENANCE WHICH IS PERFORMED BY THE TOWNSHIP. THE TOWNSHIP SHALL LIEN THE PROPERTY FOR SAID COSTS UNTIL THE TOWNSHIP HAS BEEN REIMBURSED IN FULL.



PENNSYLVANIA DEPARTMENT
OF TRANSPORTATION
7000 GEERDES BLVD
KING OF PRUSSIA, PA

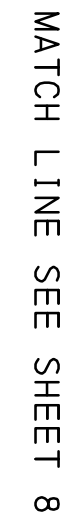


MATCH LINE SEE SHEET 7

50 0 50
SCALE IN FEET
PREPARED BY:
URS
FORT WASHINGTON, PA

NO.	DATE	REVISIONS	
GRADING AND UTILITY PLAN			
LIBERTY PROPERTY TRUST			
180 SOUTH WARNER ROAD			
UPPER MERION TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA			
URS CORPORATION		PROJECT NO.	
Consulting Engineers		21386989	
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SCALE AS NOTED	DATE	DRAWN BY SML	CHECKED BY
			SHEET NO. 8 OF 38

THIS AREA SUBJECT TO RESERVATIONS, CONDITIONS AND RESTRICTIONS GRANTED TO PECO ENERGY COMPANY IN DEED BOOK 4412, PAGES 443 & 447.



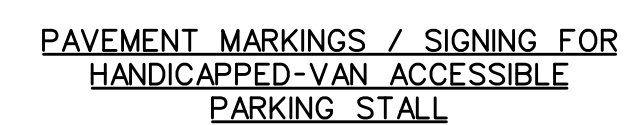
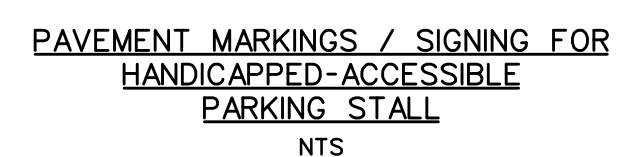
R=2897.93'
A=96.83'
CHD=578.23'07"W
957.14'

(A) THIS AREA SUBJECT TO RESERVATIONS, CONDITIONS AND RESTRICTIONS GRANTED TO PECO ENERGY COMPANY IN DEED BOOK 4412, PAGES 443 & 447.

[illegible]



NOTE: SEE UPPER MERION TOWNSHIP CODE, CHAPTER 141,
FOR MATERIALS AND CONSTRUCTION SPECIFICATIONS.



PRECAST CONCRETE WHEEL STOP DETAILS
(PLACE IN ALL UNCURBED PARKING STALLS)
NTS

GENERAL NOTES:

UNLESS OTHERWISE NOTED, ALL MATERIALS
AND CONSTRUCTION SHALL CONFORM TO THE CURRENT
EDITION OF PENNSYLVANIA DEPARTMENT OF
TRANSPORTATION PUBLICATION 408.

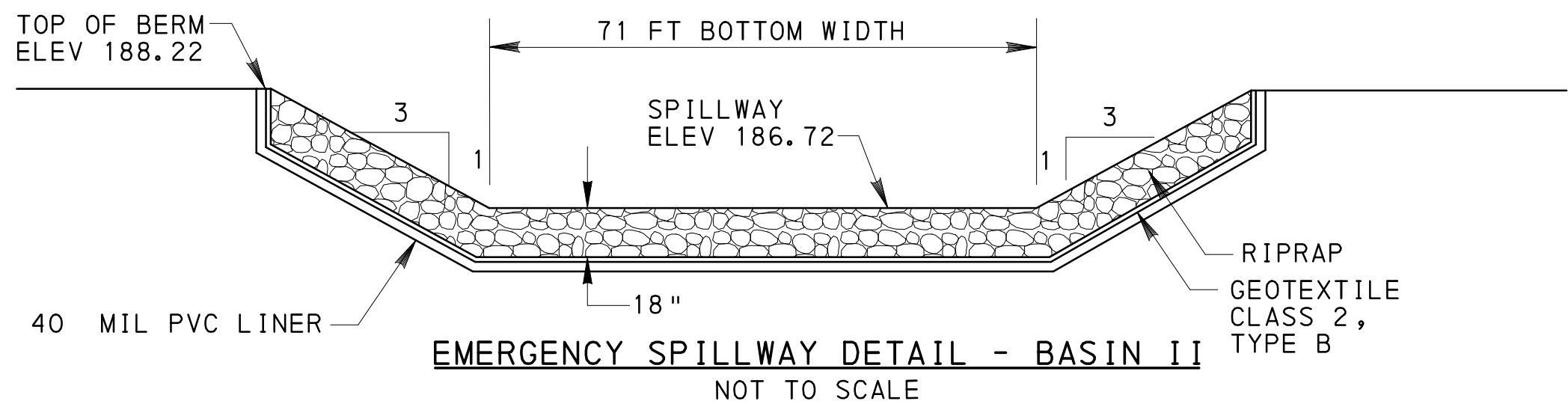
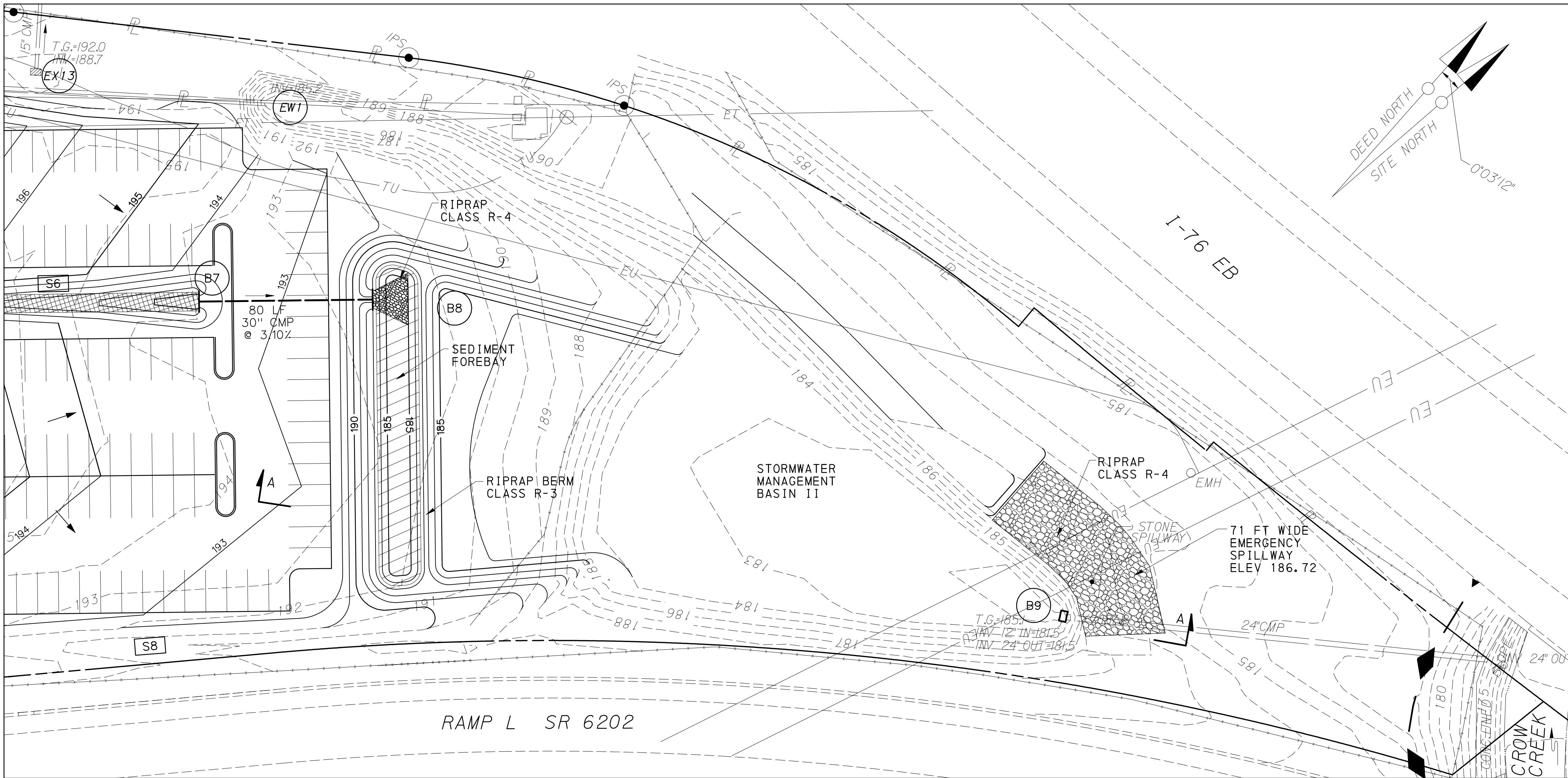
NO.	DATE	REVISIONS			
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<p style="text-align: center;"><i>URS CORPORATION</i></p> <p style="text-align: center;">Consulting Engineers</p> <p>335 Commerce Drive • Suite 300 • Fort Washington • PA • 19034-2623 (215) 367-2500 • Fax (215) 367-1000</p>					PROJECT NO.
					21386989
					FIELD BOOK
					21386989
SCALE AS NOTED	DATE	DRAWN BY SML	CHECKED BY	SHEET NO. 10 OF 38	

LEGEND

- 195 PROPOSED CONTOURS
195 EXISTING CONTOURS
PROPOSED DRAINAGE SYSTEM
EXISTING DRAINAGE SYSTEM
EU EXISTING UNDERGROUND ELECTRIC
TU EXISTING UNDERGROUND TELEPHONE
W EXISTING WATER LINE
S EXISTING SANITARY LINE
ET EXISTING OVERHEAD WIRE
EXISTING FIRE HYDRANT
100 YR FEMA FLOODPLAIN BOUNDARY
B1 DRAINAGE STRUCTURE CALLOUT
S1 CHANNEL CALLOUT
TURF REINFORCEMENT MAT
RIP RAP APRON
FLOW ARROW
TYPE D ENDWALL
SEDIMENT FOREBAY

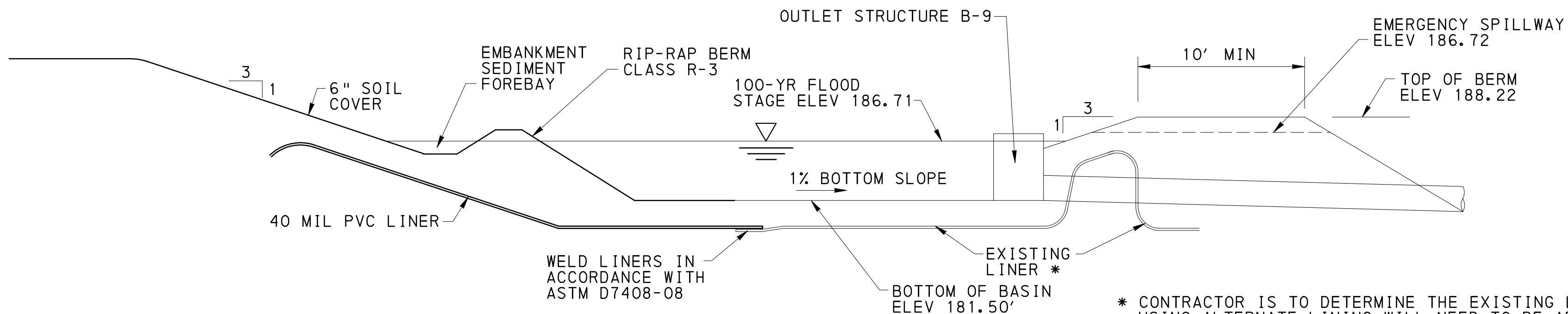


SITE ID NUMBER:
3375567



STORMWATER MANAGEMENT BASIN II DETAIL

30 0 30 60
SCALE IN FEET
1" = 30'



BASIN II CROSS SECTION A-A DETAIL

NOT TO SCALE

* CONTRACTOR IS TO DETERMINE THE EXISTING LINER TYPE. USING ALTERNATE LINING WILL NEED TO BE APPROVED BY THE TOWNSHIP.

BASIN II ELEVATION/STORAGE DATA	
ELEVATION (FT)	AREA (ACRES)
181.5	0.0007
182.0	0.0135
183.0	0.1935
184.0	0.5449
185.0	0.7400
186.0	0.8469
187.0	0.9397
188.22	1.0407

SEDIMENT FOREBAY DATA						
BASIN	REQUIRED VOL. (CU. FT.)	BERM ELEV.	BERM RIPRAP SIZE	BERM LENGTH (FT)	C.O.E.	BLOCK PAVER AREA (SQ. FT.)
II	3332	187.00	R-3	143.5	186.20	2700

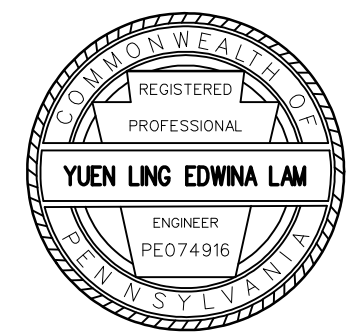
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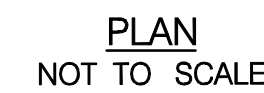
- INSTALL SEDIMENT FOREBAY AFTER COMPLETION OF ALL CONSTRUCTION ACTIVITIES WITHIN CONTRIBUTING AREA.
- INSTALL 2" WOOD STAKE AT DOWNSLOPE END OF SEDIMENT FOREBAY WITH CLEANOUT ELEVATION (C.O.E.) CLEARLY NOTED.
- INSTALL PERMEABLE BLOCK PAVERS ALONG BOTTOM OF SEDIMENT FOREBAY AND ALONG SIDE SLOPES UP TO C.O.E.

NOTES:

- SHOP DRAWINGS FOR THE PVC LINER AND GEOSYNTHETIC FABRIC ARE TO BE SUBMITTED TO THE TOWNSHIP FOR REVIEW PRIOR TO INSTALLATION.
- A LINER MANUFACTURER REPRESENTATIVE IS TO BE PRESENT TO CERTIFY INSTALLATION OF THE LINER AND THE SEALING OF THE SEAMS.
- PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408 SPECIFICATIONS, SECTION 703 AND SECTION 735.

PREPARED BY:
URS
FORT WASHINGTON, PA





5'

DEPRESSED CURB

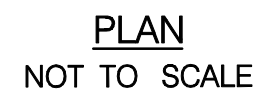
RIPRAP

D

GEOTEXTILE CLASS 2, TYPE B

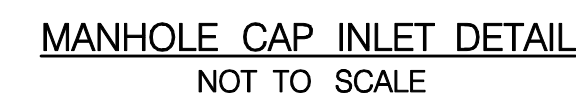
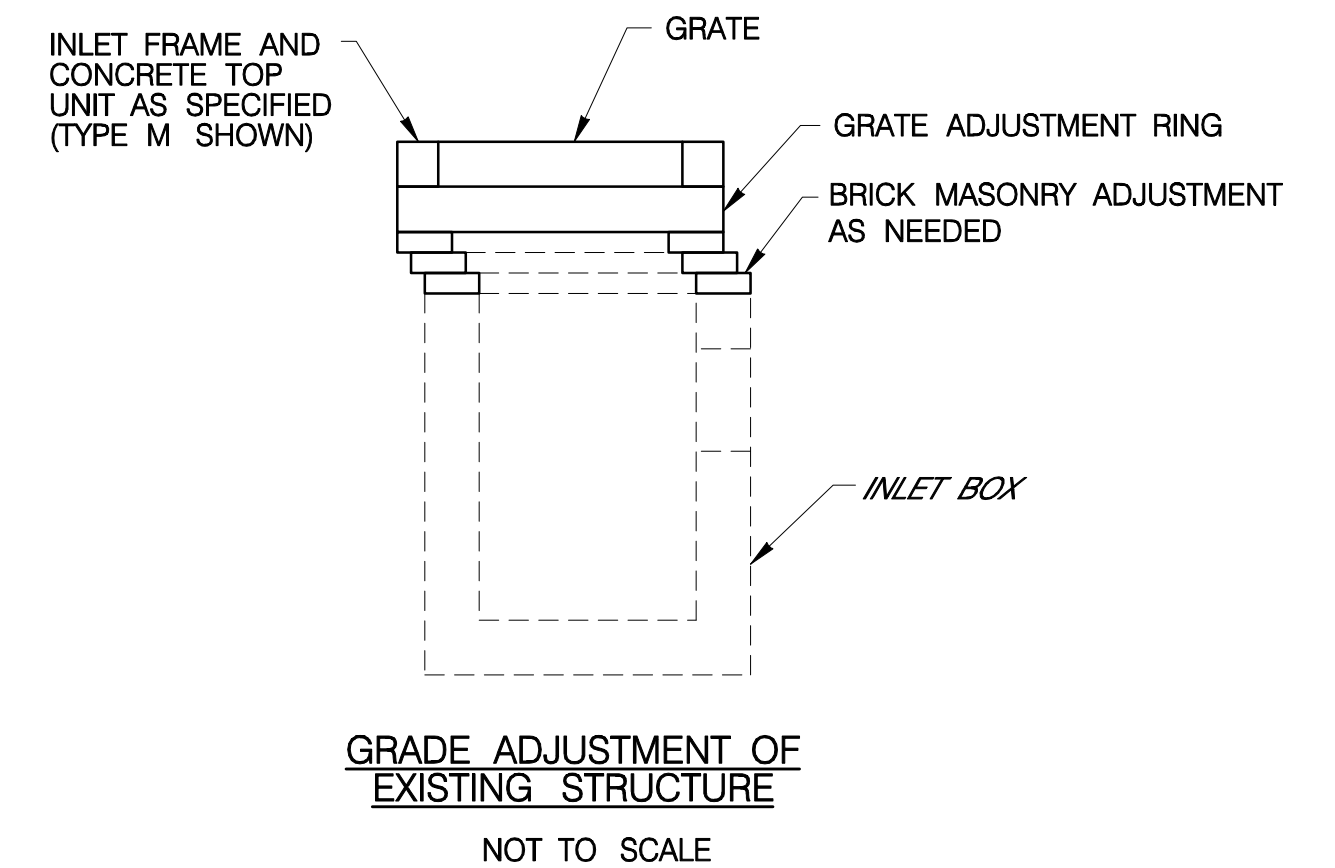
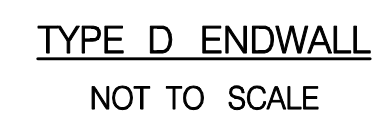
SECTION
NOT TO SCALE

RIPRAP LINED CURB CUT DETAIL
NOT TO SCALE




SECTION A-A
PERMANENT LINING
NOT TO SCALE

PLAN VIEW
NOT TO SCALE



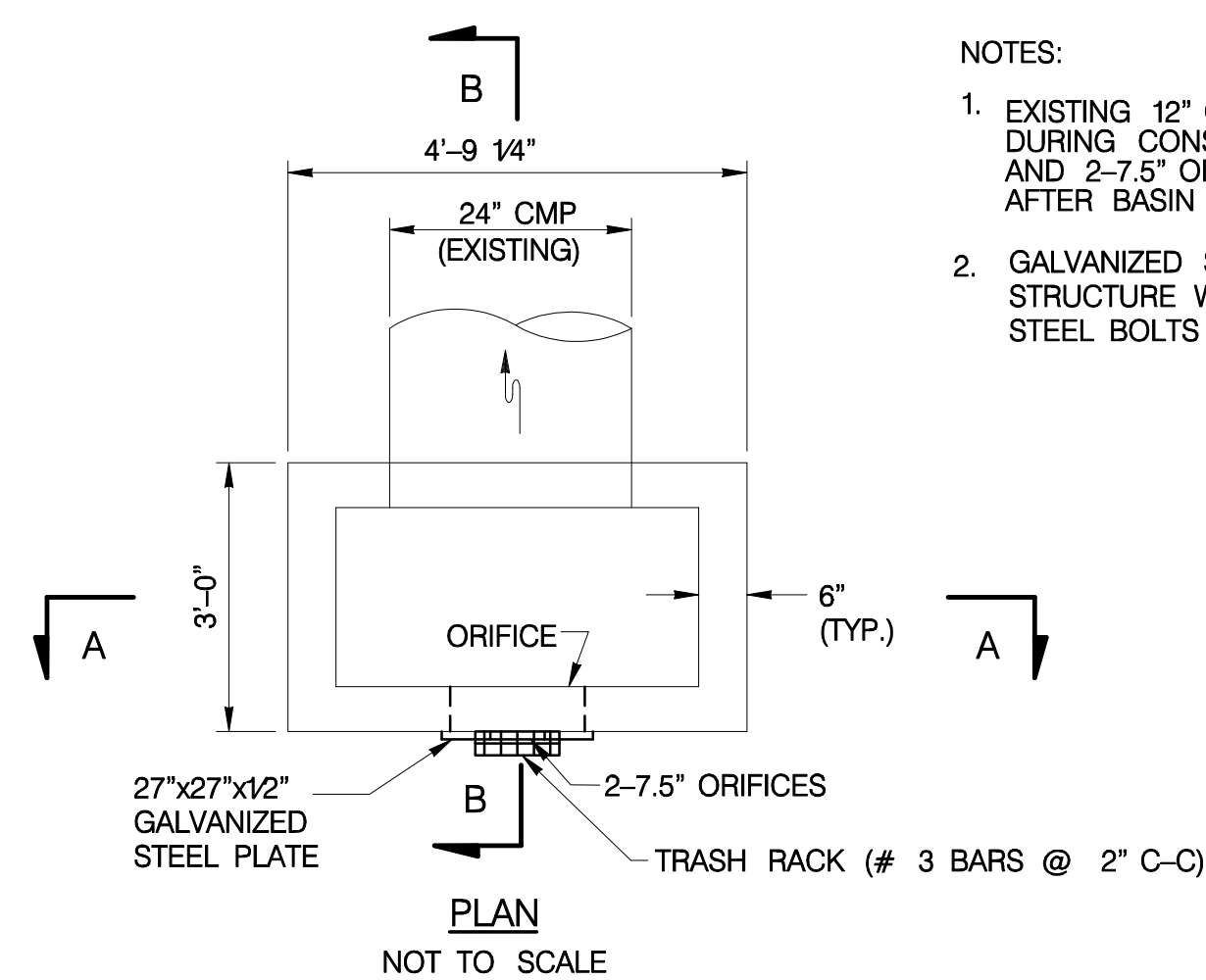
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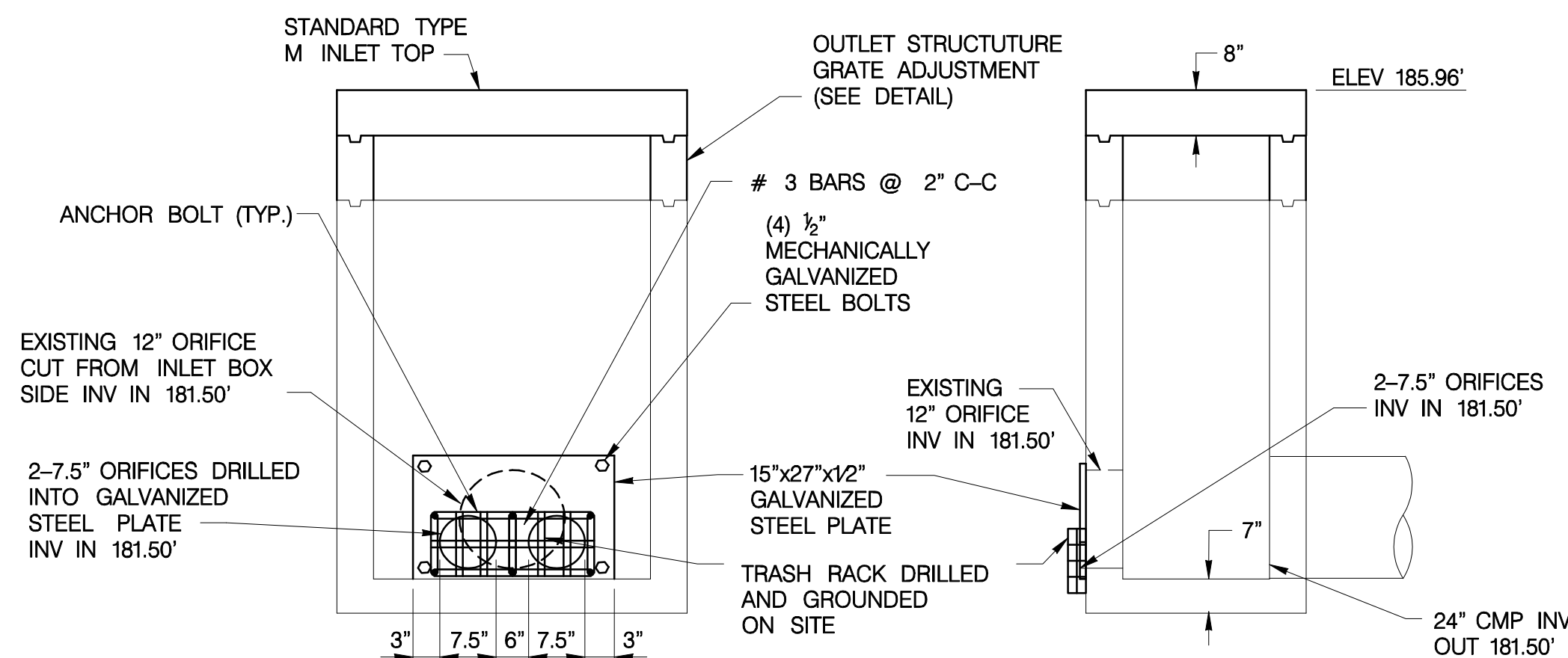
<p align="center">DRAINAGE DETAILS</p> <p align="center">LIBERTY PROPERTY TRUST</p> <p align="center">180 SOUTH WARNER ROAD</p> <p align="center">UPPER MERION TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA</p>				
<p align="center"><i>URS CORPORATION</i></p> <p align="center">Consulting Engineers</p>				<p>PROJECT NO.</p> <p align="center">21386989</p>
<p>335 Commerce Drive • Suite 300 • Fort Washington • PA • 19034-2623</p> <p align="center">(215) 367-2500 • Fax (215) 367-1000</p>				<p>FIELD BOOK</p> <p align="center">21386989</p>
<p align="center">SCALE</p> <p align="center">AS NOTED</p>	<p align="center">DATE</p>	<p align="center">DRAWN BY</p> <p align="center">SMI</p>	<p align="center">CHECKED BY</p>	<p align="center">SHEET NO.</p> <p align="center">14 OF 38</p>



1. SHOP DRAWINGS FOR THE PVC LINER AND GEOSYNTHETIC FABRIC ARE TO BE SUBMITTED TO THE TOWNSHIP FOR REVIEW PRIOR TO INSTALLATION.
2. A LINER MANUFACTURER REPRESENTATIVE IS TO BE PRESENT TO CERTIFY INSTALLATION OF THE LINER AND THE SEALING OF THE SEAMS.



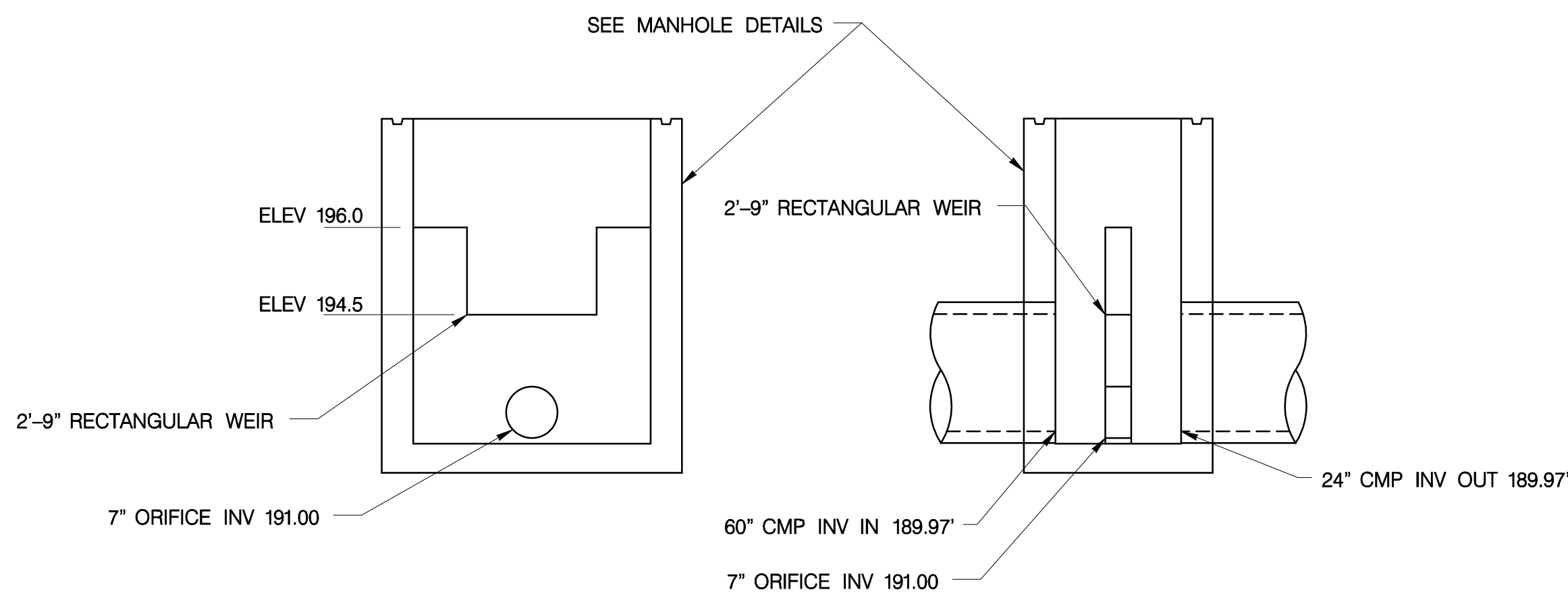
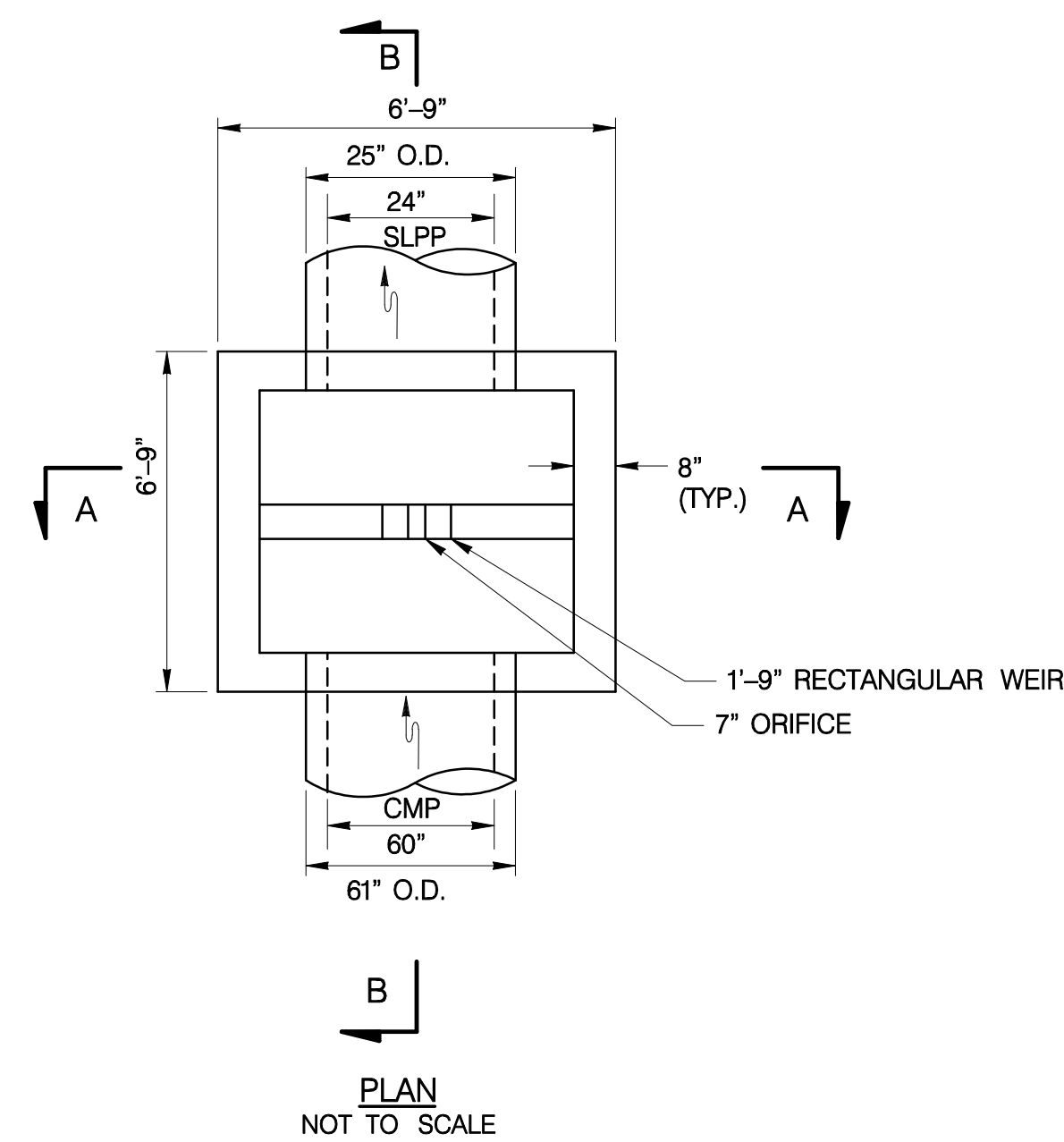
1. EXISTING 12" ORIFICE AND TRASH RACK TO BE USED DURING CONSTRUCTION. GALVANIZED STEEL PLATE AND 2-7.5" ORIFICES DRILLED INTO PLATE INSTALLED AFTER BASIN IS SEEDED AND STABILIZED.
2. GALVANIZED STEEL PLATE TO BE FASTENED TO OUTLET STRUCTURE WITH (4) 1/2" MECHANICALLY GALVANIZED STEEL BOLTS



SECTION A-A
NOT TO SCALE

SECTION B-B
NOT TO SCALE

BASIN II OUTLET STRUCTURE B-9 DETAIL
NOT TO SCALE



SECTION A-A
NOT TO SCALE

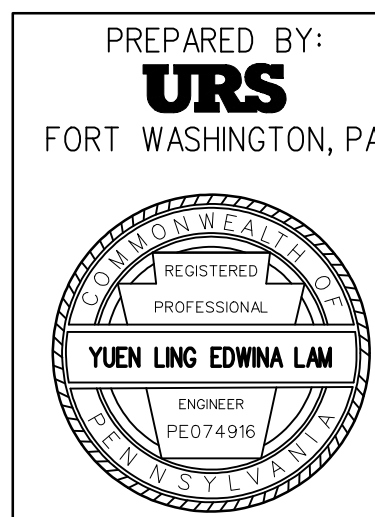
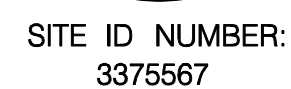
SECTION B-B
NOT TO SCALE

BASIN 1 OUTLET STRUCTURE A11 DETAIL
NOT TO SCALE



1. SHOP DRAWINGS FOR THE PVC LINER AND GEOSYNTHETIC FABRIC ARE TO BE SUBMITTED TO THE TOWNSHIP FOR REVIEW PRIOR TO INSTALLATION.
2. A LINER MANUFACTURER REPRESENTATIVE IS TO BE PRESENT TO CERTIFY INSTALLATION OF THE LINER AND THE SEALING OF THE SEAMS.

* MAX DEPTH IS BASED ON 100-YEAR STORM IN PERMANENT CONDITION.

[illegible]

PLAN - INLET BOXES

2" \pm 1/8"

1 3/4" \pm 1/8"

C WALL

1 1/2" \pm 1/8"

1 3/4" \pm 1/8"

7/8" \pm 1/8"

1" \pm 1/8"

DETAIL B

6"

3"

2 3/4"

3 1/2"

INSIDE FACE OF INLET

12" NOMINAL

2 5/8"

2 7/8"

NONSHRINK MORTAR

DETAIL C

Technical drawing of a rectangular plate with a central hole, showing SECTION F-F and PLAN VIEW.

SECTION F-F: A cross-sectional view of the plate. The total width is 57 1/4". The width of the central hole is 45 1/4". The thickness of the plate is 2" MIN. 6" MAX. The section is labeled #4 BAR (TYP).

PLAN VIEW: A top-down view of the plate. The outer dimensions are 57 1/4" by 36". The inner dimensions of the central hole are 45 1/4" by 24". The plate has a 6" wide border. The section line F-F is indicated by arrows pointing to the top and bottom edges of the plate.

NOTES:

1. PROVIDE MATERIALS AND CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTIONS 805, 806 AND 714. PERMIT ONLY GRATES AND GRADE ADJUSTMENT SYSTEMS SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 FOR DEVIATIONS OR MODIFICATIONS OF THE STANDARDS SUBMIT SHOP DRAWINGS FOR APPROVAL.
2. GRADE ADJUSTMENT RINGS :
 - A. CUSTOM FABRICATE EACH ADJUSTMENT RING FROM MEASUREMENTS PROVIDED WITH EACH ORDER.
 - B. MANUFACTURE BAR STOCK AND RETAINER CLIP FROM U.S. MADE CARBON STEEL MEETING OR EXCEEDING THE MINIMUM REQUIREMENTS OF ASTM A-36M AND AASHTO TABLE 10.32.1A.
 - C. REQUIRE FULL CIRCUMFERENTIAL WELDS ON BOTH TOP AND BOTTOM RINGS. MAKE THE INNER WELD A BEVEL GROOVE WELD (FLUSH FINISH) FOR PROPER SEATING OF GRATE AND MAKE THE OUTER WELD A FILLET WELD.
 - D. PROVIDE AN ADJUSTMENT RING WHICH IS FLUSH WITH COVER AND DOES NOT ALLOW EXCESSIVE MOVEMENT. PROVIDE AN ADJUSTMENT RING WHICH CONFORMS TO THE SHAPE OF THE ORIGINAL FRAME.
3. PROVIDE RADIUS OF 36" TYPICAL FOR ALL FILLETS AND ROUNDS, 18" TYPICAL FOR ALL FILLETS AND ROUNDS, UNLESS NOTED.
4. ATTACH STEEL GRADE ADJUSTMENT RINGS RIGIDLY TO THE FRAME AND SET PRECAST CONCRETE GRADE ADJUSTMENT RINGS ON A MORTAR BED.
5. CAST IRON GRATES MAY BE USED AS ALTERNATES TO STRUCTURAL STEEL GRATES PROVIDED THEY ARE SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 AND APPROVED FOR HS25 LOADING. CAST IRON GRATES NOT APPROVED FOR HS25 LOADING MAY BE USED OUTSIDE OF THE TRAVEL LANES; AT THE EDGE OF OUTSIDE SHOULDERS, SWALES, WIDE MEDIAN SWALES, AND INFILL AREAS.

4" (SEE NOTE 5)

9'-0" MAX HEIGHT


6" MIN

7'

PROVIDE ONE LAYER OF REINF. 0.12in²FT EACH WAY MIN.

#4 BARS 12" C TO C TYP. EACH WAY TOP & BOTTOM OR 0.20 in²ft WWF 6" MAX SPA. TOP & BOT.

LEGEND

 ADDITIONAL CONCRETE
TO SHAPE THE BOTTOM

#13 (#4) BARS
300 (12") C TO C
TYP. EACH WAY TOP &
BOTTOM OR 420 mm $\frac{2}{16}$
(0.20 in / ft) WWF
152 (6") MAX SPA
TOP & BOTTOM

6" 59 1/4" 6"

4" MIN
(SEE NOTE 5)

COVER ADJUSTMENT SLAB
TYPE 3

9'-0" MAX
HEIGHT

7" 6" MIN.

2" MIN

SECTION D-D
TYPE 3 ONLY

Figure 10 consists of two diagrams, (a) and (b), illustrating typical reinforcement details for a slab and column.

(a) Slab Reinforcement Detail: This diagram shows a cross-section of a slab with a width of $57\frac{3}{4}$ inches and a height of 8 inches minimum. The reinforcement includes top and bottom bars with stirrups at the ends. The text "SEE DETAILS B & C FOR JOINT DETAILS." is present, along with the label "SECTION F-F".

(b) Column Reinforcement Detail: This diagram shows a cross-section of a column with a square shape. The outer dimension is 50 inches, and the inner dimension is $45\frac{1}{4}$ inches. The reinforcement includes #5 bars and stirrups. A force F is applied to the column.

TYPE 1

TYPE 2

TYPE 3

COVER ADJUSTMENT SLABS

4" MIN
(SEE NOTE 5)

6" 38" 6"

COVER ADJUSTMENT SLAB
TYPE 1

4" MIN
SEE NOTE 5

9'-0" MAX
HEIGHT

PROVIDE
ONE LAYER OF
REINF.
(250 mm ²m)
EACH WAY MIN.

6" MIN.

7"

SECTION B-B

6" 59 14" 6"

COVER ADJUSTMENT SLAB
TYPE 2

9'-0" MAX
HEIGHT

6" MIN.

7"

SECTION C-C

#4 BARS
12" C. TO C.
TOP & BOTTOM, 0.20 in²/ft WWF
6" MAX SPA
TOP & BOT.

71 1/4"

8" MIN

SEE DETAILS B & C FOR JOINT DETAILS.

SECTION G-G

TYPE 2

13"

#5 BARS

24"

45 1/4"

71 1/4"

36"

6"

G

13"

8" MIN

SEE DETAILS B & C FOR JOINT DETAILS.

SECTION H-H

TYPE 3

13"

#5 BARS

24"

45 1/4"

71 1/4"

50"

12" MIN

H

PRECAST CONCRETE GRADE ADJUSTMENT RINGS

NOTES

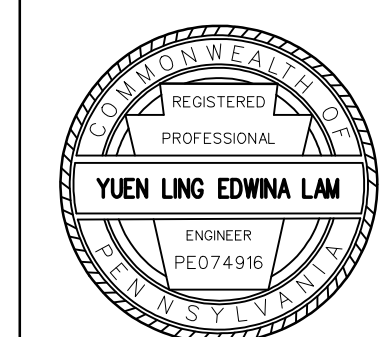
1. CONSTRUCT INLET BOXES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 714.
2. PERMIT ONLY PRECAST INLET BOXES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15. USE CLASS AA CEMENT CONC FOR PRECAST BOXES. FOR DEVIATIONS OR MODIFICATIONS OF THE STANDARDS, SUBMIT SHOP DRAWINGS FOR APPROVAL.
3. PROVIDE STANDARD INLET BOXES AND COVER ADJUSTMENT SLABS WITH A 24"x 46" OPENING TO ACCOMMODATE STANDARD TOP COMPONENTS.
4. FOR INLETS THAT DEVIATE FROM THE STANDARD SUBMIT SPECIAL DETAILS AND DESIGN FOR THE INLET WALLS AND BASE TO THE BUREAU OF CONSTRUCTION FOR REVIEW AND APPROVAL. CONSTRUCT INLETS THAT EXCEED 5' IN HEIGHT WITH STEPS SIMILAR TO MANHOLES (SEE RC-39M). FOR INLETS OTHER THAN AS SHOWN ON THE STANDARDS, PROVIDE REINFORCEMENT BASED ON PHL 93 (HS 25) LOADING AND IN ACCORDANCE WITH PUBLICATION 408.
5. LOCATE PIPE OR PIPES, AS INDICATED, WITH THE INLET BOTTOM SHAPED TO CHANNEL THE FLOW TOWARD THE OUTLET PIPE. WHEN PROJECT CONDITIONS REQUIRE PIPE BLOCKOUTS TO BE FORMED WITHIN 4" FROM THE TOP OF THE INLET BOX, PROVIDE AN ADDITIONAL #3 REINFORCEMENT BAR LOCATED 1" FROM THE TOP OF THE INLET BASE, FULL WIDTH ALONG 1 5/8" FROM THE TOP OF THE INLET BASE, FULL WIDTH ALONG THE INLET FACE. REMOVE ANY VISIBLE PORTION OF THE BAR IF REQUIRED DURING INSTALLATION AND PRIOR TO JOINING THE PIPE TO THE INLET. IF REINFORCED CONCRETE PIPE IS USED, THE PIPE BLOCKOUT MAY BE FORMED "FLUSH" WITH THE INLET BASE. LIMIT PIPE BLOCKOUT OF WALL TO 1".
6. PLACE SUBBASE MATERIAL MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 350.2, IN LAYERS 4" THICK, COMPACTED TO A DENSITY SATISFACTORY TO THE ENGINEER AND INCIDENTAL TO THE INLET PAY ITEM.
7. FOR PIPE DIAMETERS LARGER THAN 48" RCP OR 54" CMP, USE A MODIFIED INLET BOX, SHEET 9.
8. PROVIDE CONSTRUCTION JOINTS AS REQUIRED FOR INLET BOXES THAT ARE NOT MONOLITHIC. SEE DETAILS A & B SHEET 7.
9. TAPERS MAY BE PROVIDED ON VERTICAL FACES OF PRECAST INLET BOX BASE UNITS TO FACILITATE FORM STRIPPING. TAPERS WILL RESULT IN INTERNAL BOTTOM DIMENSIONS THAT VARY TO A MAXIMUM OF 1".
10. PROVIDE SUITABLE LIFTING DEVICES FOR HANDLING AND INSTALLATION. GALVANIZED METAL DEVICES AS SPECIFIED IN PUB. 408 SECTION 1105. TAPERS MAY BE PROVIDED ON INSIDE VERTICAL FACES OF PRECAST INLET TOPS TO FACILITATE FORM STRIPPING. TAPERS WILL RESULT IN INTERNAL BOTTOM DIMENSIONS THAT VARY TO A MAXIMUM OF 1".

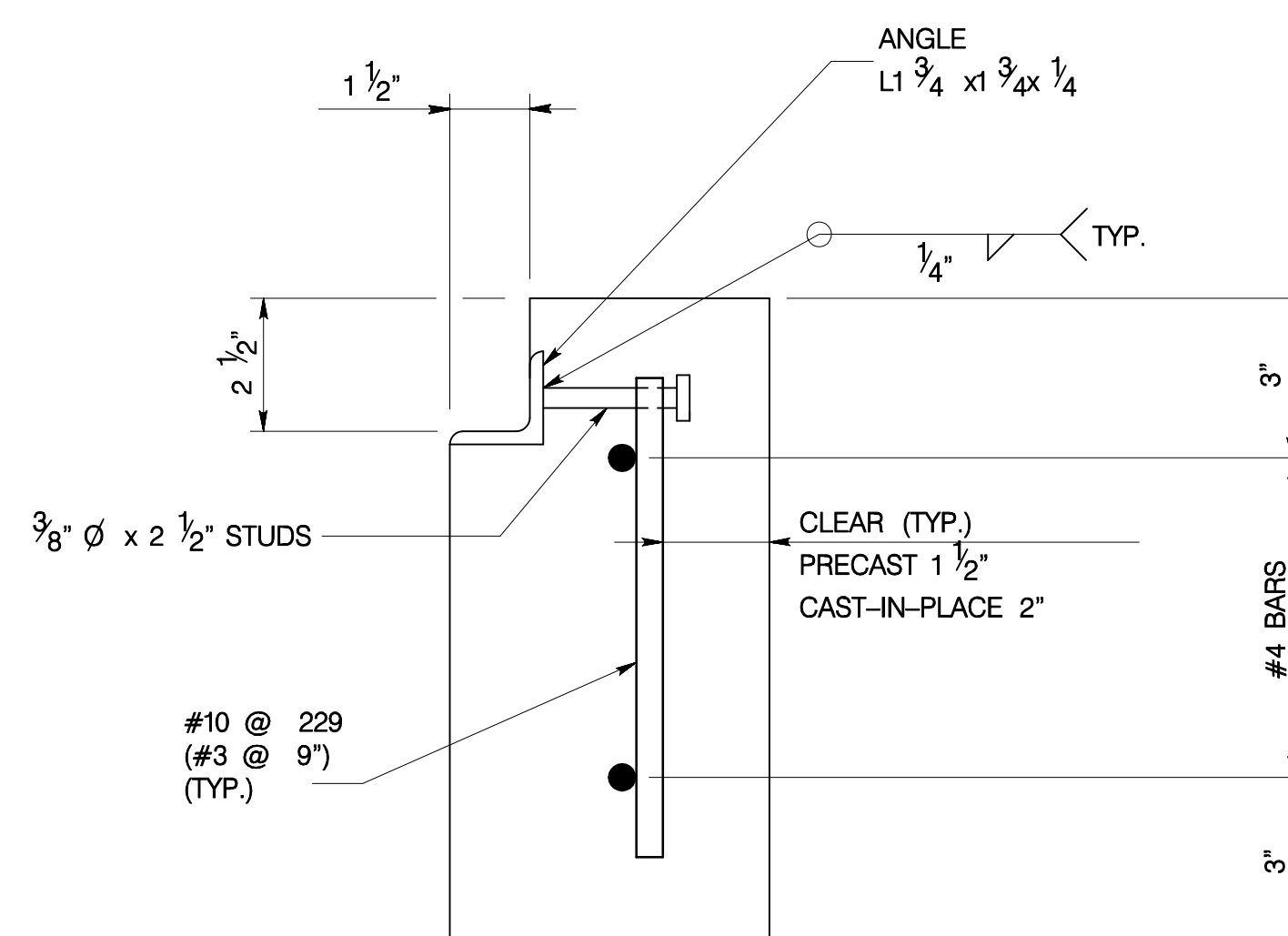
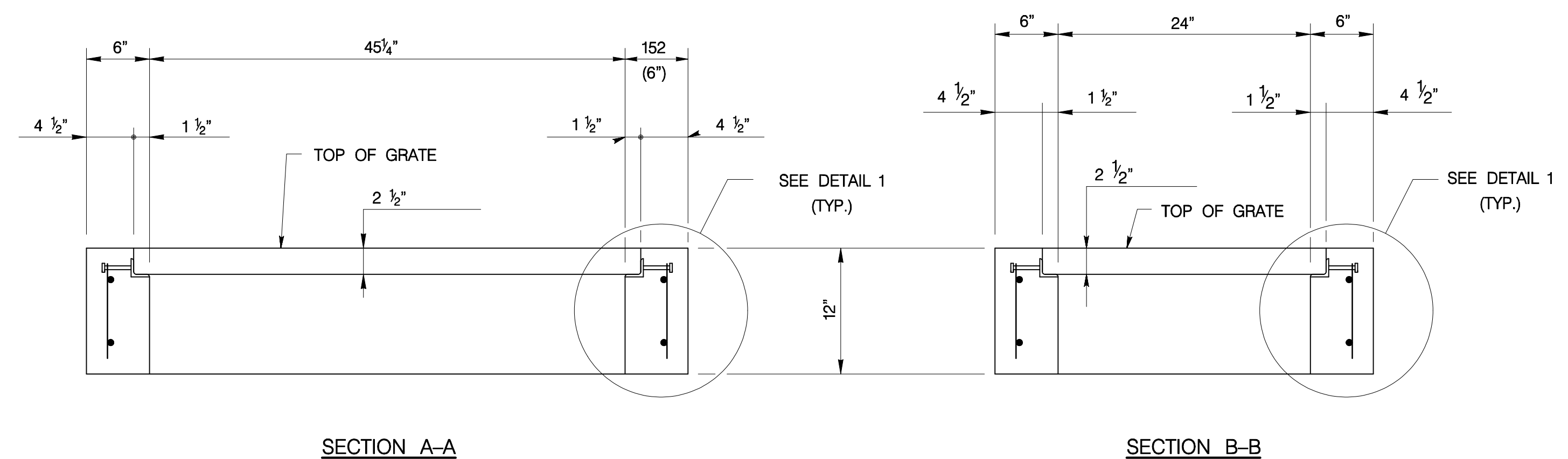
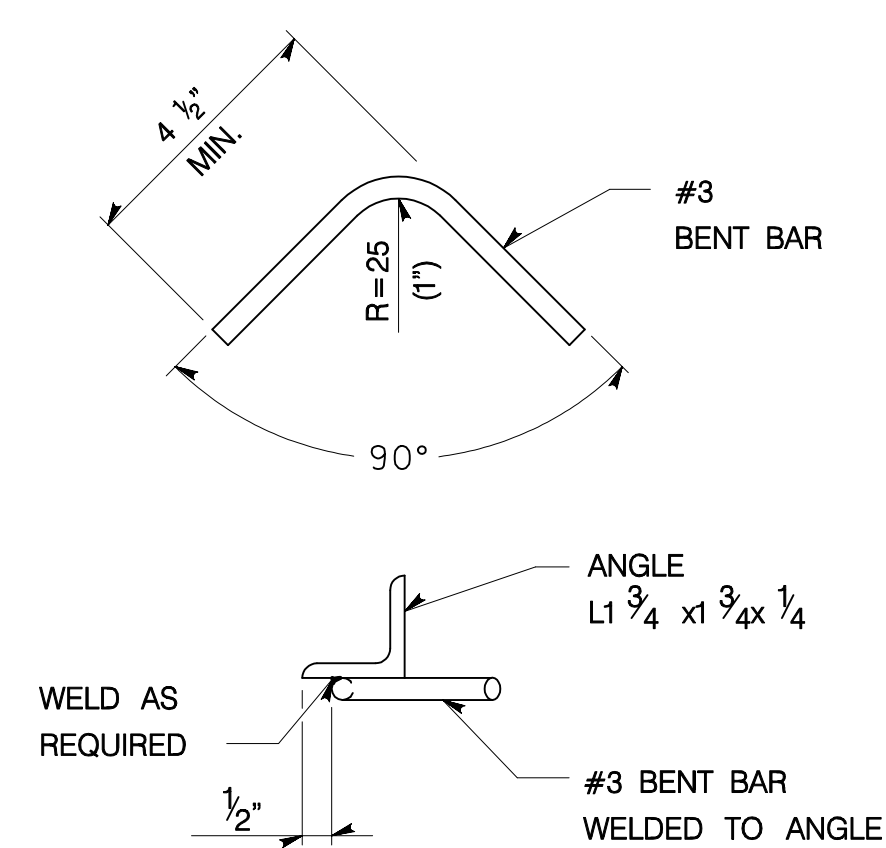
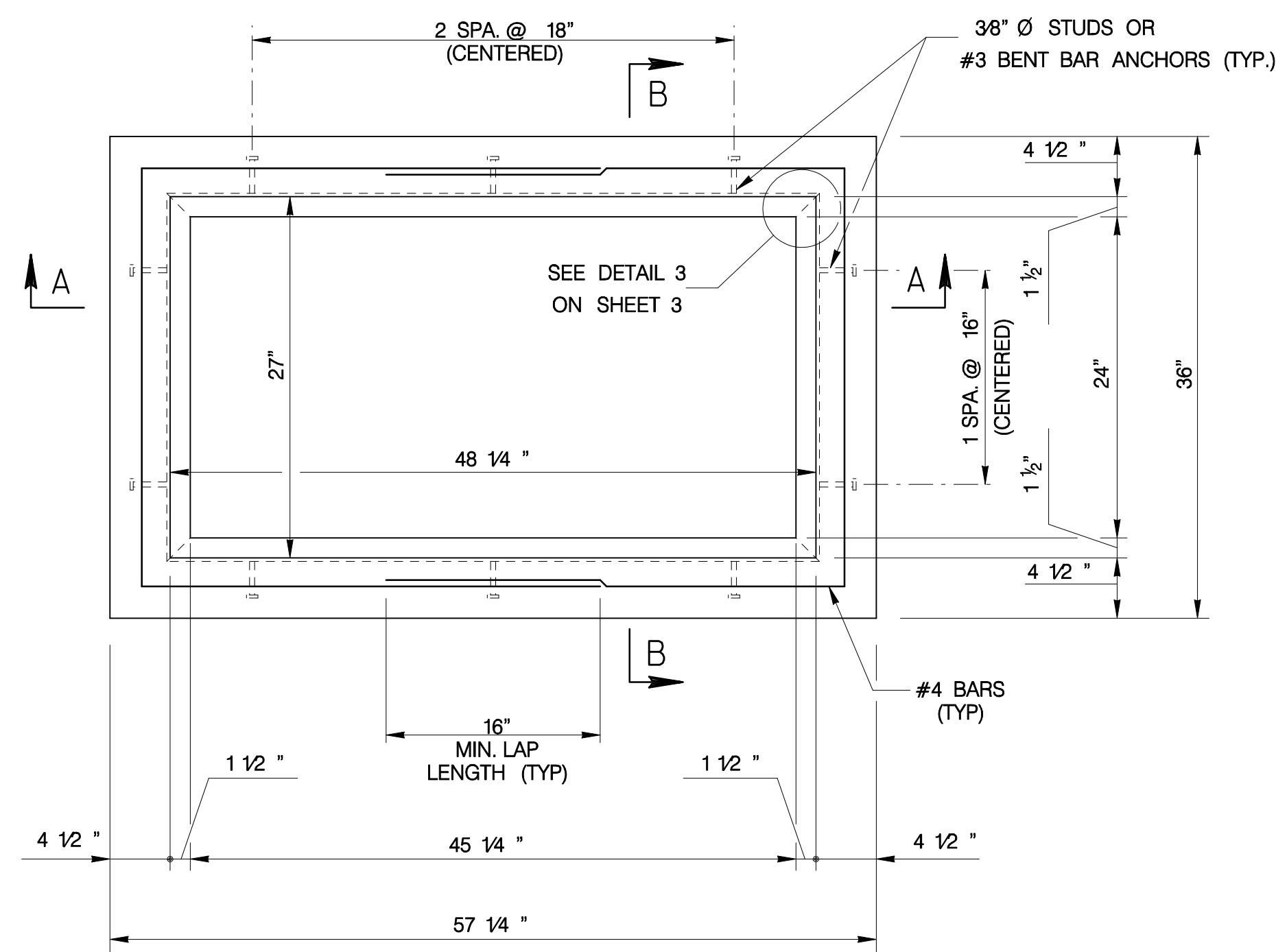


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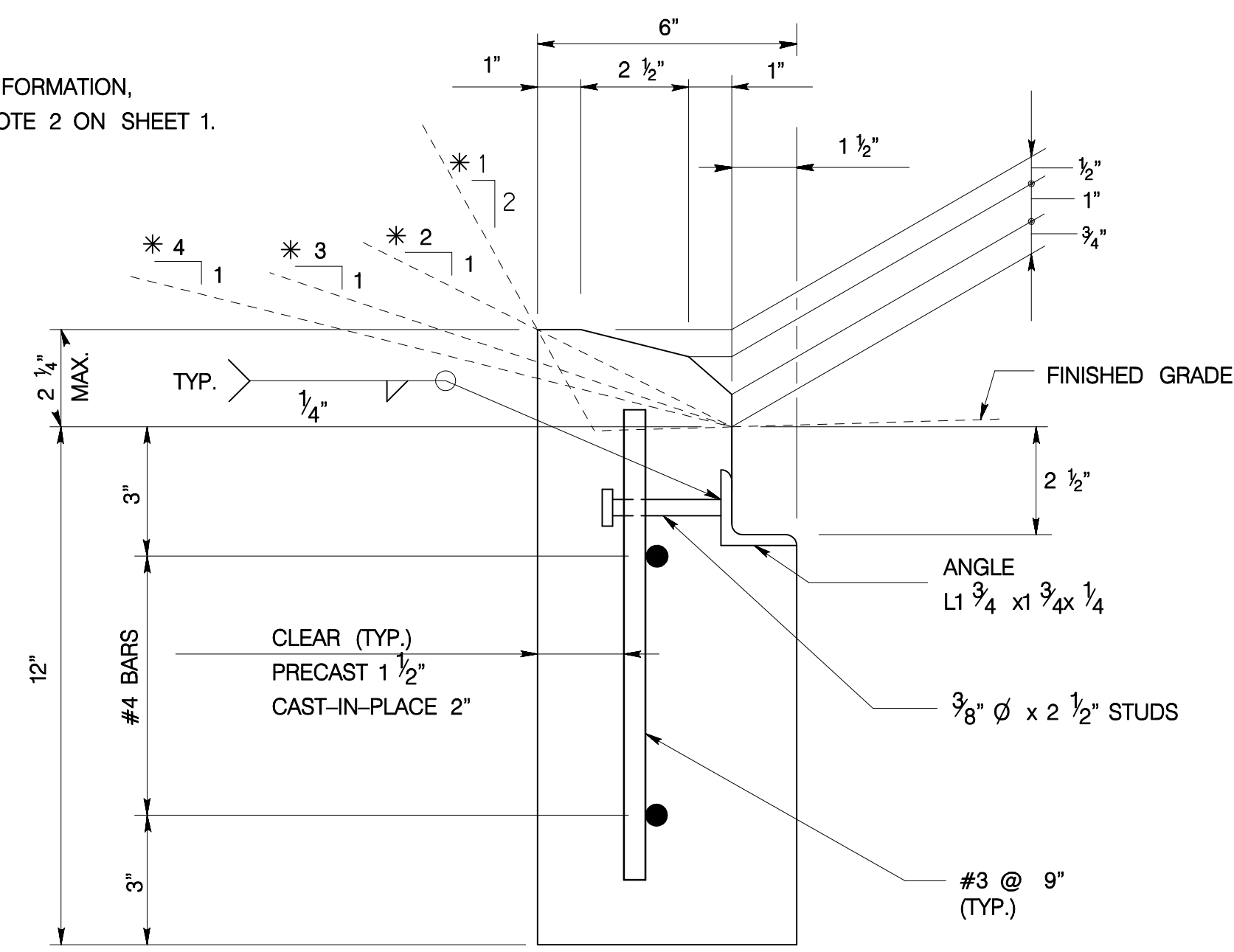
[illegible]

PREPARED BY:
URS
FORT WASHINGTON, PA





* FOR ADDITIONAL INFORMATION,
SEE PLACEMENT NOTE 2 ON SHEET 1.




SITE ID NUMBER:
3375567

NO.	DATE			REVISIONS	
DRAINAGE DETAILS					
LIBERTY PROPERTY TRUST					
180 SOUTH WARNER ROAD					
UPPER MERION TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA					
URS CORPORATION Consulting Engineers				PROJECT NO. 21386989	
335 Commerce Drive - Suite 300 - Fort Washington - PA - 19034-2623 (215) 367-2500 • Fax (215) 367-1000				FIELD BOOK 21386989	
SCALE AS NOTED	DATE	DRAWN BY SML	CHECKED BY	SHEET NO. 19 OF 38	

PREPARED BY:

URS

FORT WASHINGTON, PA

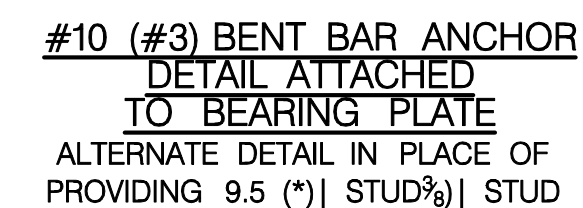


COMMONWEALTH OF PENNSYLVANIA

REGISTERED
PROFESSIONAL

YUEN LING EDWINA LAM

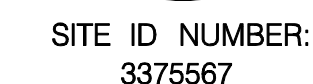
ENGINEER
PE074916



FRONT ELEVATION

NOTES

1. FOR ADDITIONAL NOTES SEE SHEET 1.
2. FABRICATOR TO DETERMINE NUMBER OF BARS REQUIRED TO MATCH SHAPE INDICATED. PROVIDE ONE, TWO, OR THREE BARS AS REQUIRED.
3. A MAXIMUM OF TWO HOLES ARE PERMITTED IN THE PLATE TO POSITION AND HOLD THE PLATE IN PLACE DURING FABRICATION. HOLES ARE NOT PERMITTED TO BE GREATER THAN 1/2" DIAMETER.

[illegible]

PREPARED BY:
URS
FORT WASHINGTON, PA

DRAINAGE DETAILS

LIBERTY PROPERTY TRUST

180 SOUTH WARNER ROAD

URS CORPORATION

Consulting Engineers

335 Commerce Drive • Suite 300 • Fort Washington • PA • 19034-2623
(215) 367-2500 • Fax (215) 367-1000

SCALE AS NOTED	DATE	DRAWN BY SML	CHECKED BY
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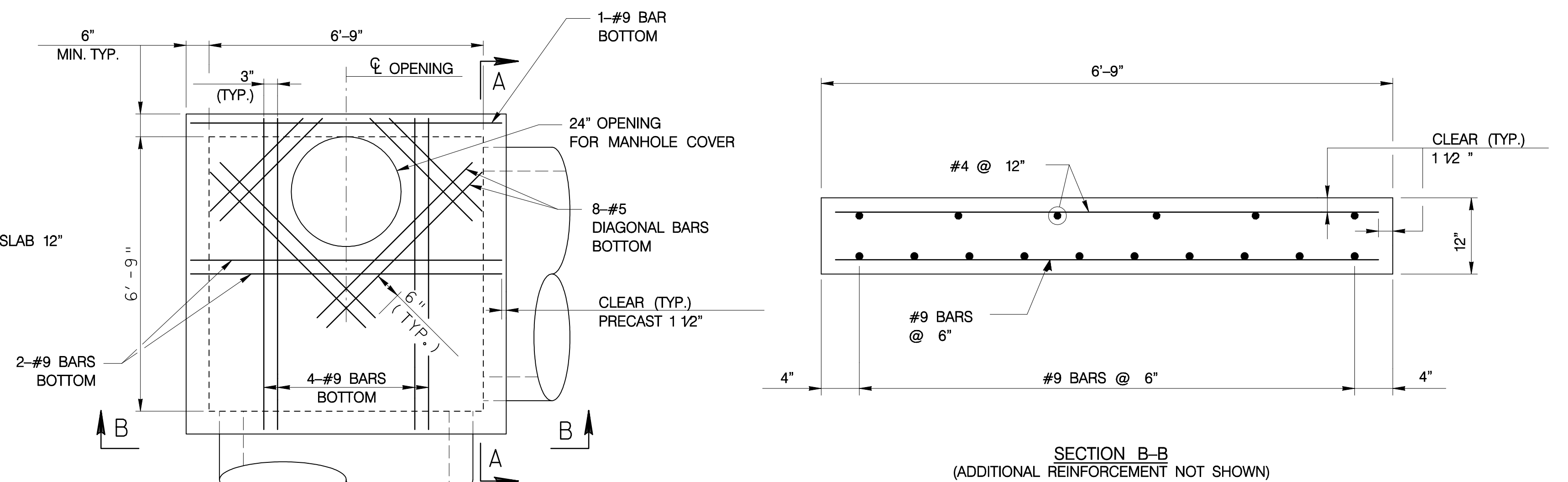
PROJECT NO

FIELD BOOK

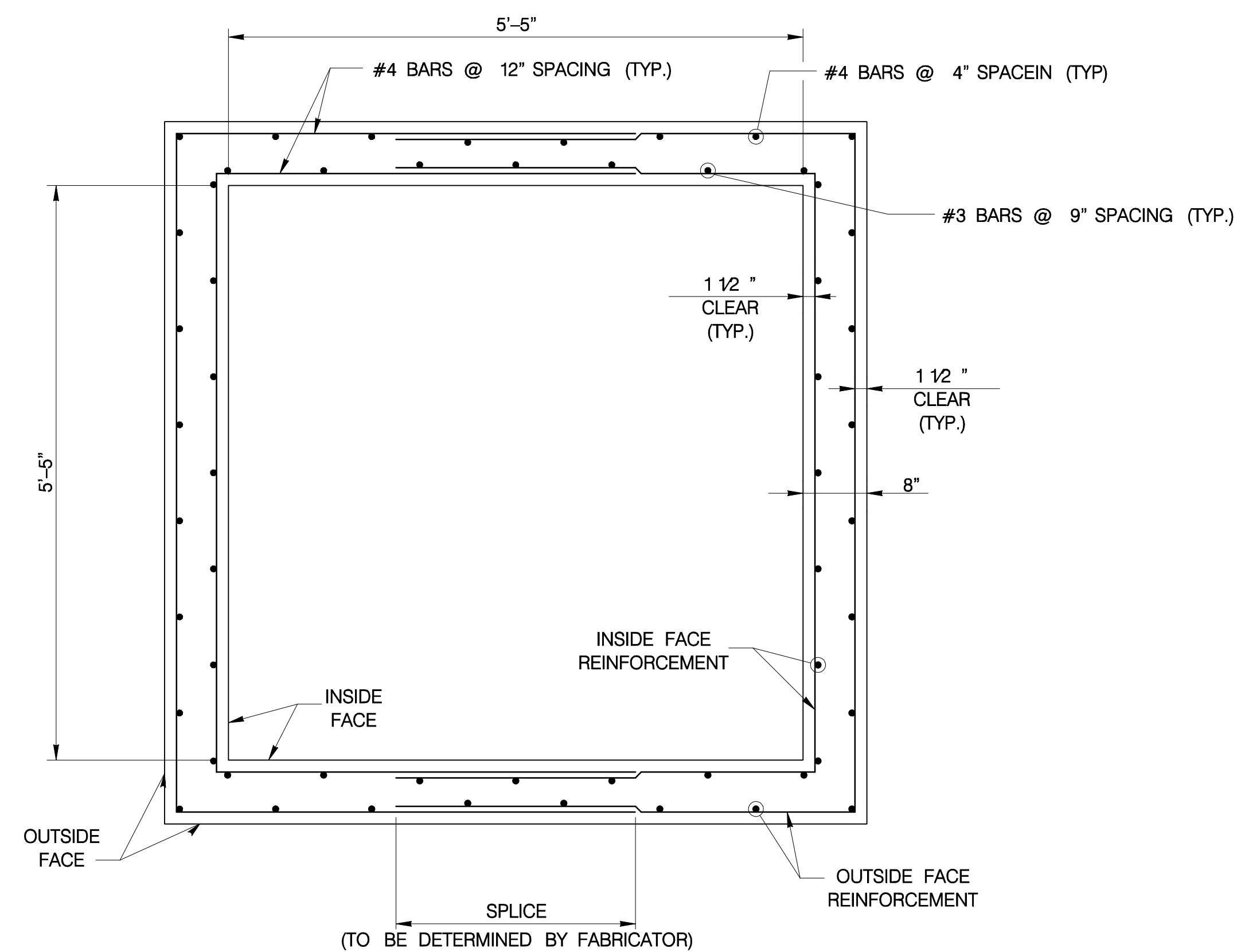
SHEET NO.
20 OF 38

SECTION A-A

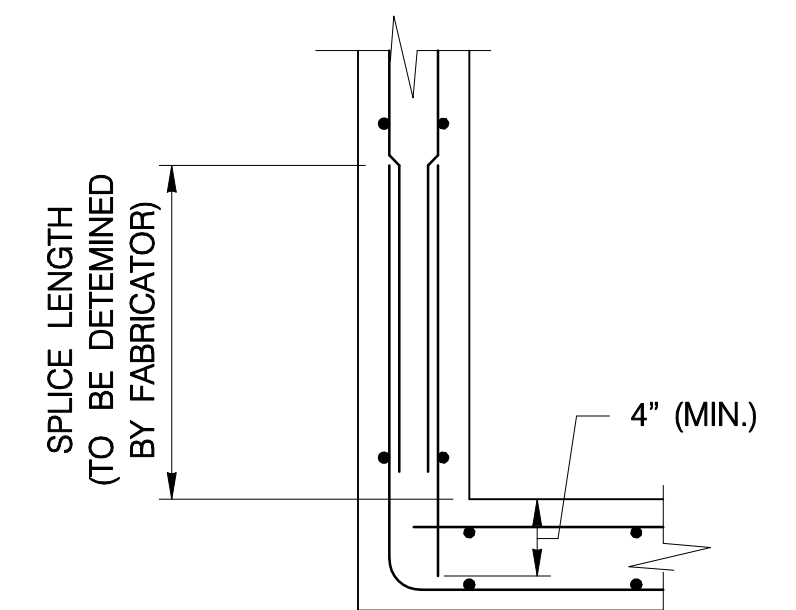
NOTE:
PROVIDE #3 BARS TO SUPPORT THE PIPE OPENING
DURING FABRICATION. LOCATE BARS 1 1/2" CLEAR FROM
TOP OR BOTTOM OF THE SECTION. CUT BARS IN FIELD
PRIOR TO INSTALLING PIPE.



SECTION B-B
(ADDITIONAL REINFORCEMENT NOT SHOWN)

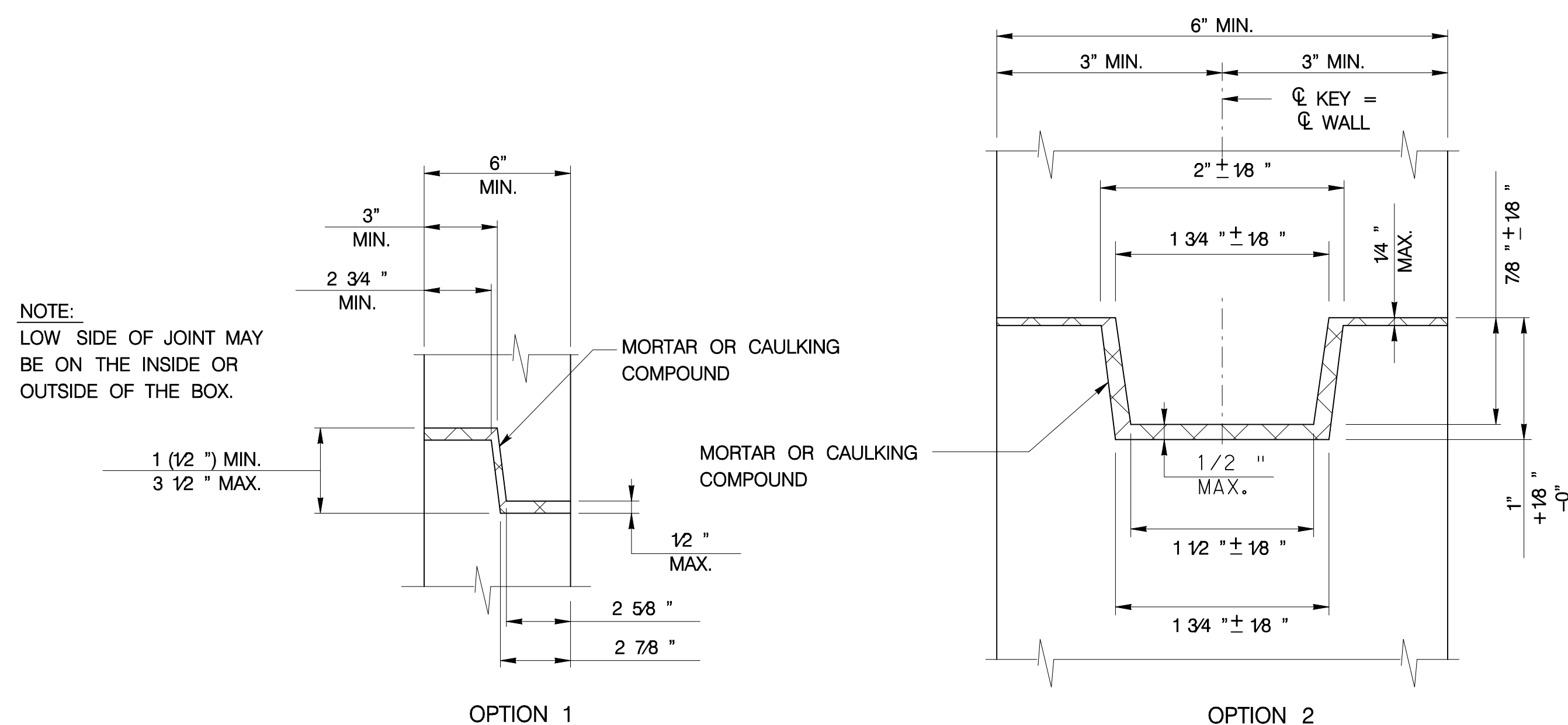


HORIZONTAL SECTION
WITH FOUR REINFORCEMENT LAYERS
(RISER SECTIONS AND BASE SECTIONS)



FOUR REINFORCEMENT LAYERS

OPTIONAL REINFORCEMENT DETAILS



JOINT DETAILS

MANHOLE DETAILS

NOT TO SCALE



SITE ID NUMBER:
3375567

PREPARED BY:
URS
FORT WASHINGTON, PA

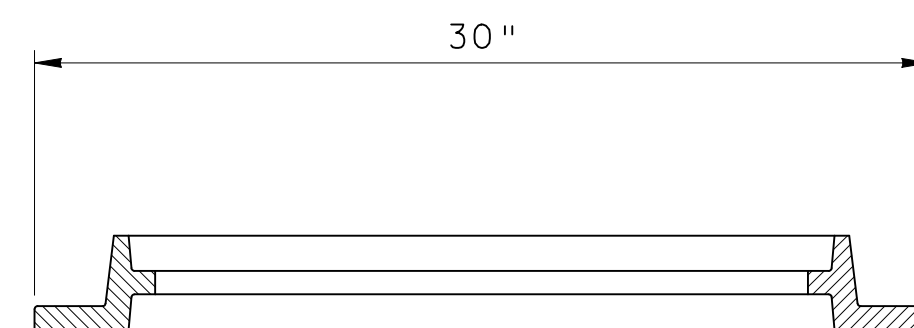
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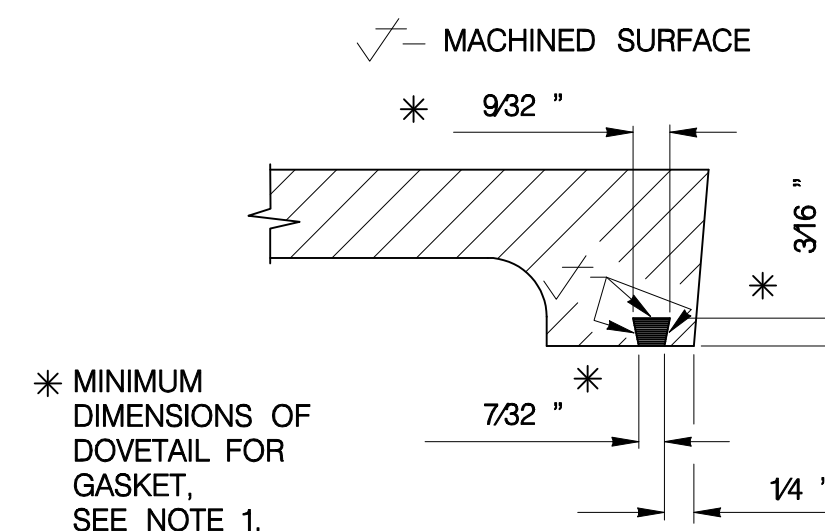
- | STRUCTURE | TYPE | RIM ELEV | INVERT IN | INVERT OUT | RISER SECTION, R (FT) | OVERALL HEIGHT, H (FT) |
|-----------|---------------------------------|----------|---|------------|-----------------------|------------------------|
| A06 | MANHOLE, TYPE 6 BOX | 202.51 | 194.28 (A05)
191.83 (A07) | 191.83 | 6.66 | 11.43 |
| A07 | MANHOLE, TYPE 6 BOX | 202.61 | — | 192.03 | 6.56 | 11.33 |
| A09 | MANHOLE, TYPE 6 BOX | 200.54 | 191.20 (A07)
193.70 (A08) | 191.20 | 5.32 | 10.09 |
| A10 | MANHOLE, TYPE 6 BOX | 200.13 | 191.04 (A03A)
191.00 (A06)
191.00 (A09) | 191.00 | 5.11 | 9.88 |
| A11 ▲ | MANHOLE, SPECIAL,
TYPE 6 BOX | 199.90 | 189.97 | 189.97 | 5.91 | 10.68 |

▲ SEE BASIN OUTLET STRUCTURE A11 DETAIL FOR ADDITIONAL INFORMATION

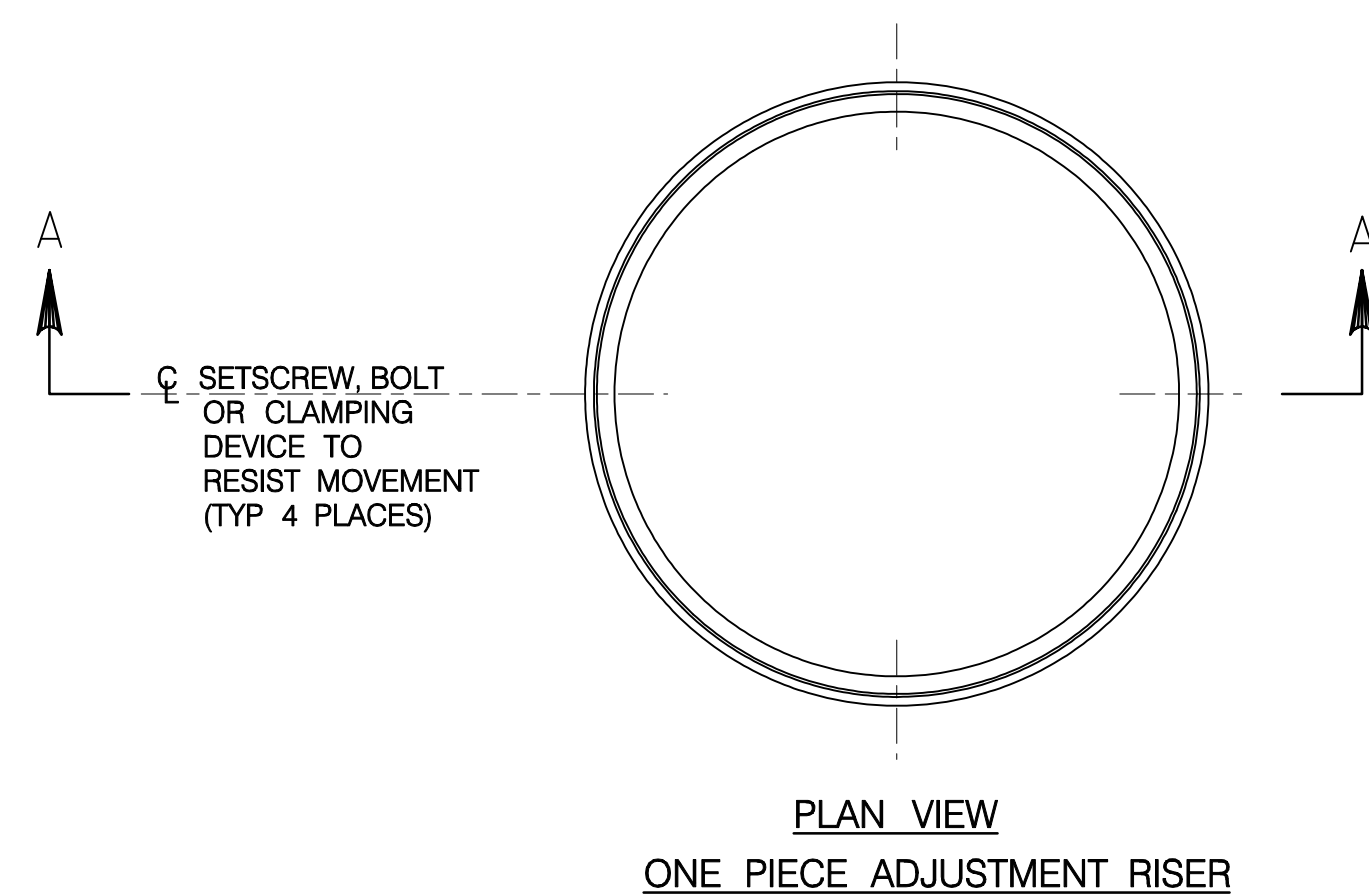
NOT TO SCALE



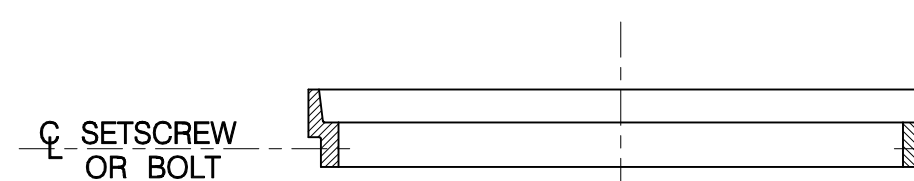
ELEVATION VIEW
OF MANHOLE FRAME



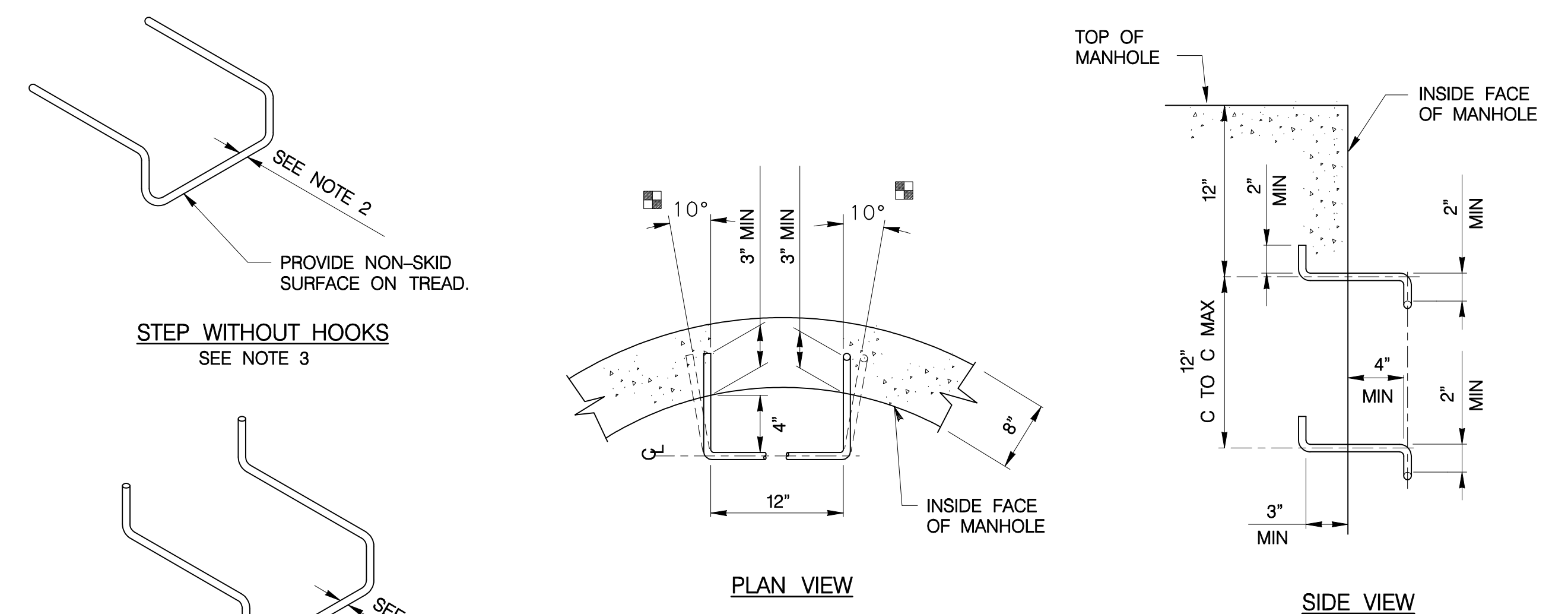
DETAIL A
GASKET SEALING SYSTEM



PLAN VIEW



SECTION A-A
ADJUSTMENT RISER



TYPICAL STEP CONFIGURATION

MANHOLE STEPS

NOTES

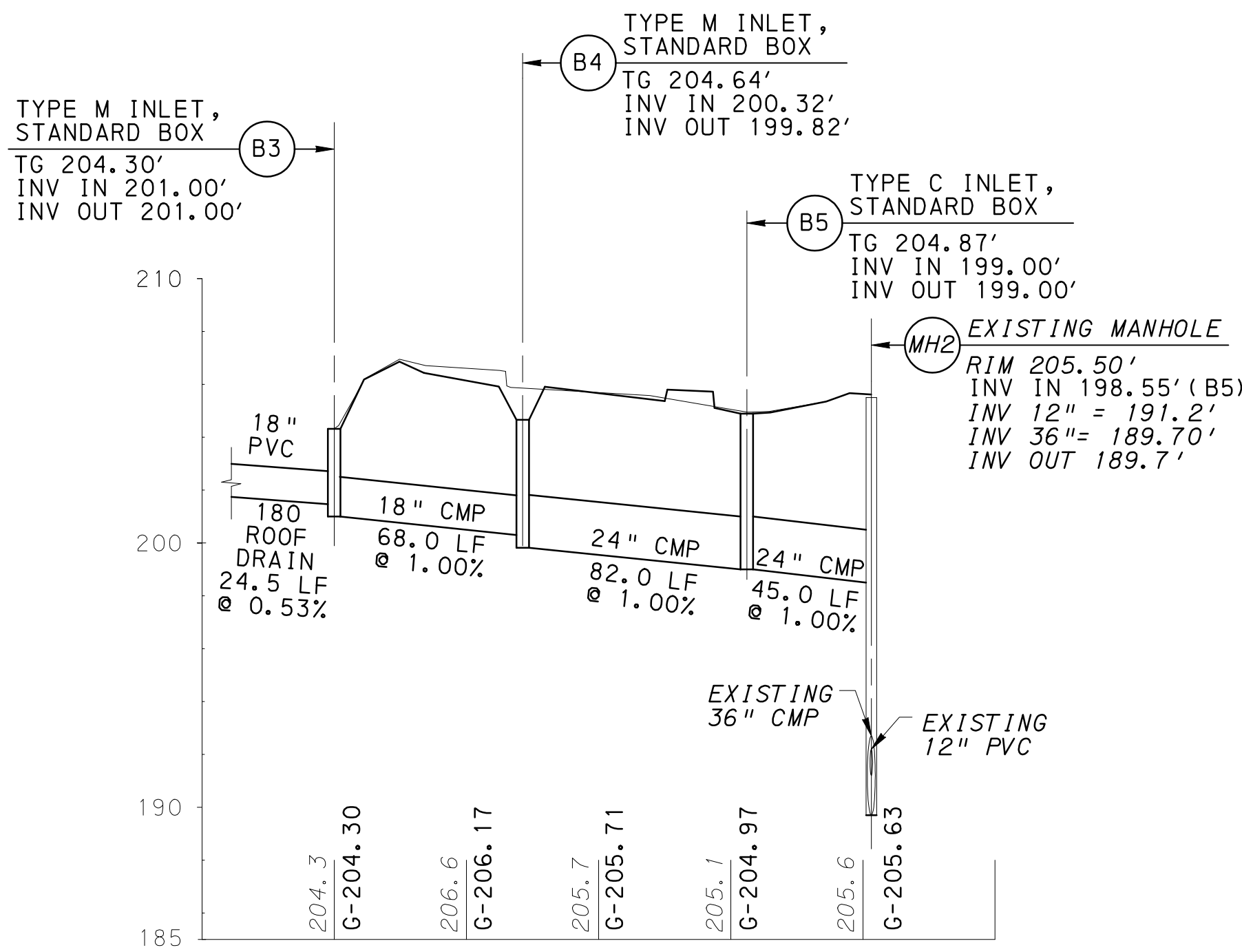
1. PROVIDE MANHOLE STEPS MEETING TOWNSHIP REQUIREMENTS. ALTERNATE CONFIGURATIONS AND DIMENSIONS, AS APPROVED BY THE ENGINEER, MAY BE USED.
2. PROVIDE MINIMUM 1" SECTION DIMENSION FOR METAL STEPS. PROVIDE MINIMUM 3/4" SECTION DIMENSION FOR NON-DETERIORATING MATERIAL STEPS.
3. MECHANICAL ANCHOR REQUIRED FOR INSTALLATION OF STEPS WITHOUT HOOKS.



SITE ID NUMBER:
3375567

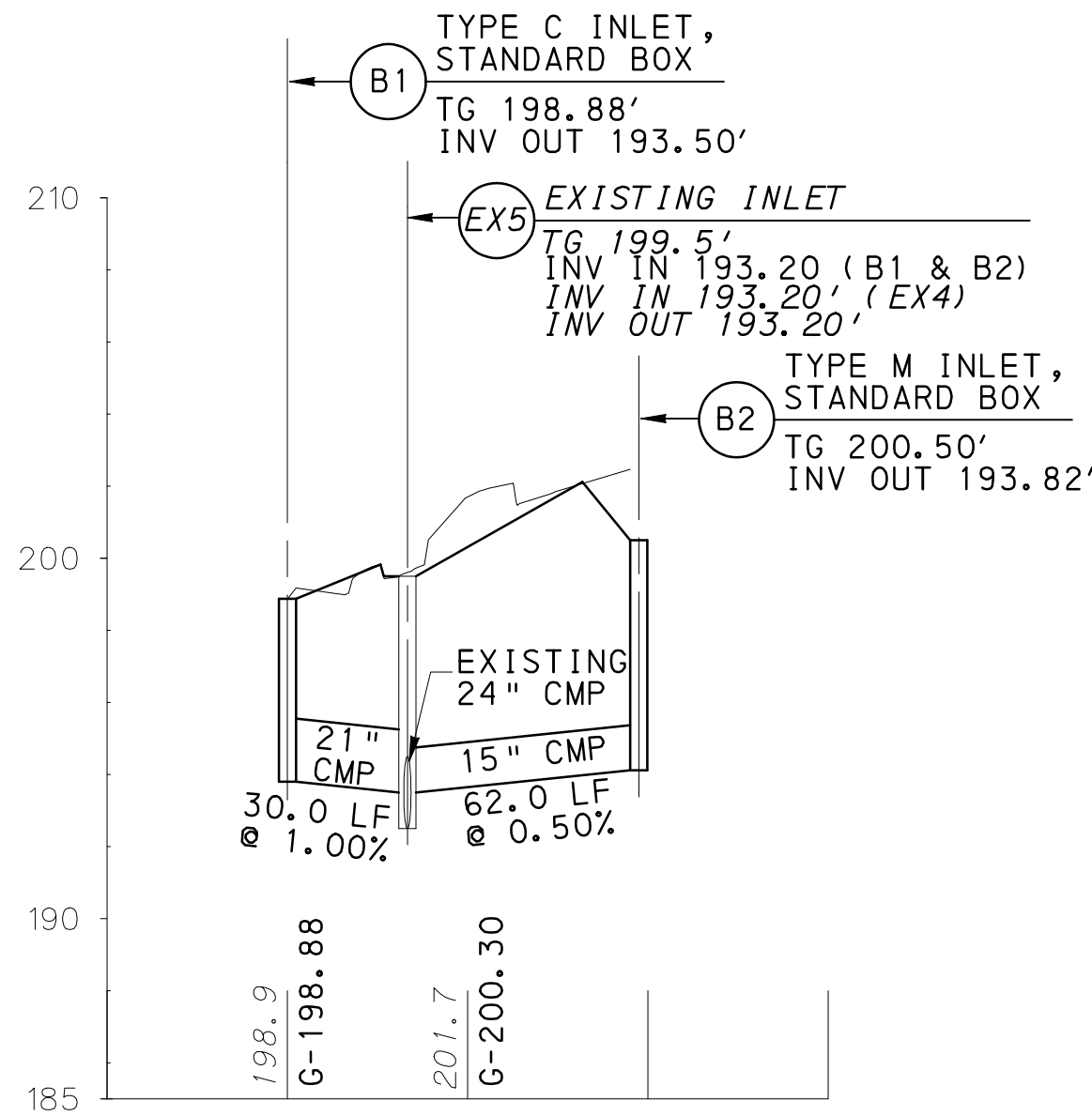
PREPARED BY:
URS
FORT WASHINGTON, PA

[illegible]



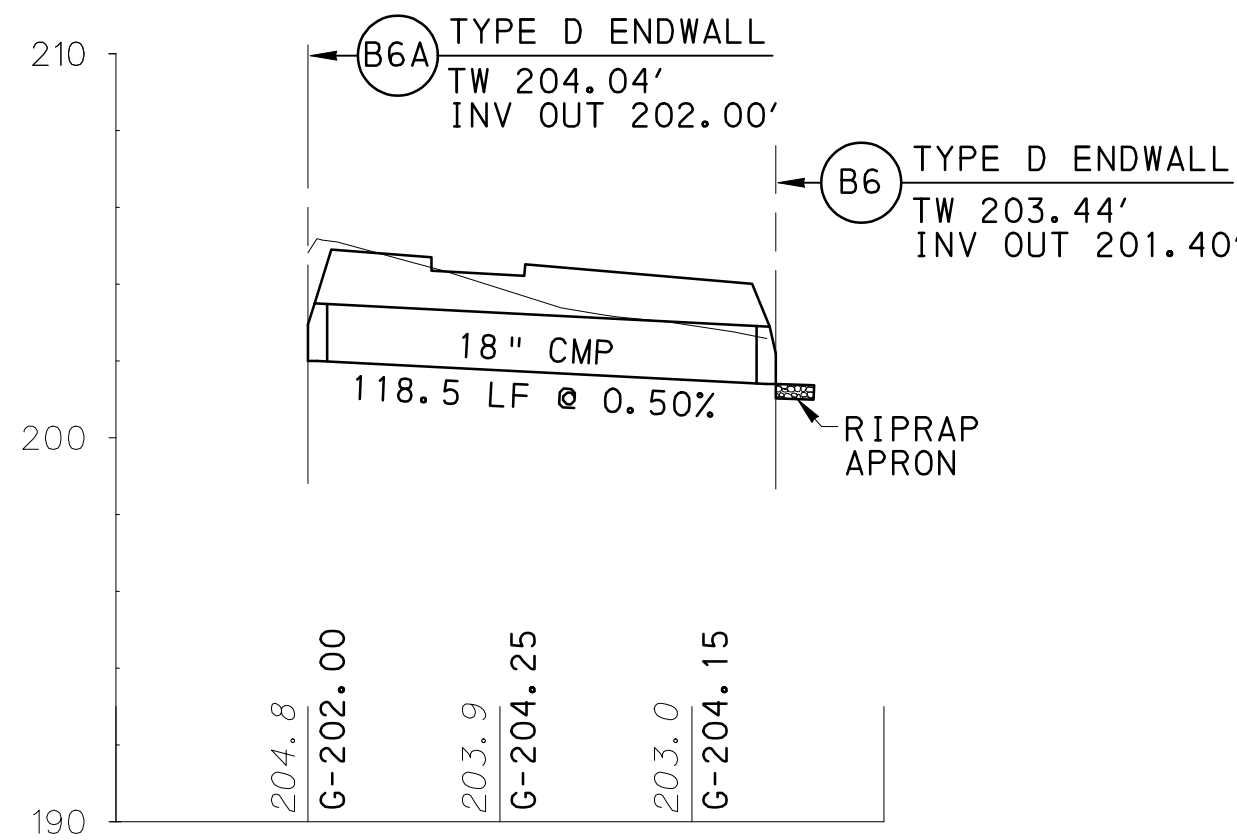
PIPE PROFILE

PROPOSED INLET B3 TO
EXISTING MANHOLE MH2



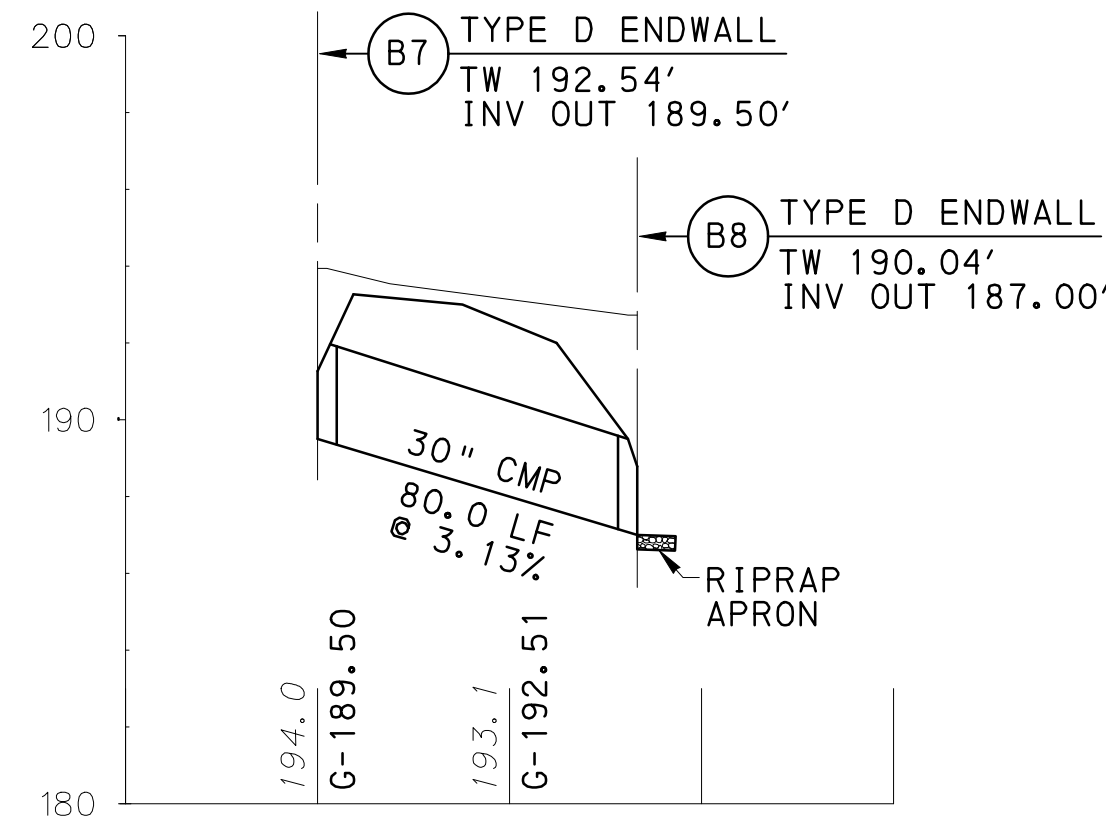
PIPE PROFILE

PROPOSED INLET B1 TO EXISTING INLET EX5
PROPOSED INLET B2 TO EXISTING INLET EX5



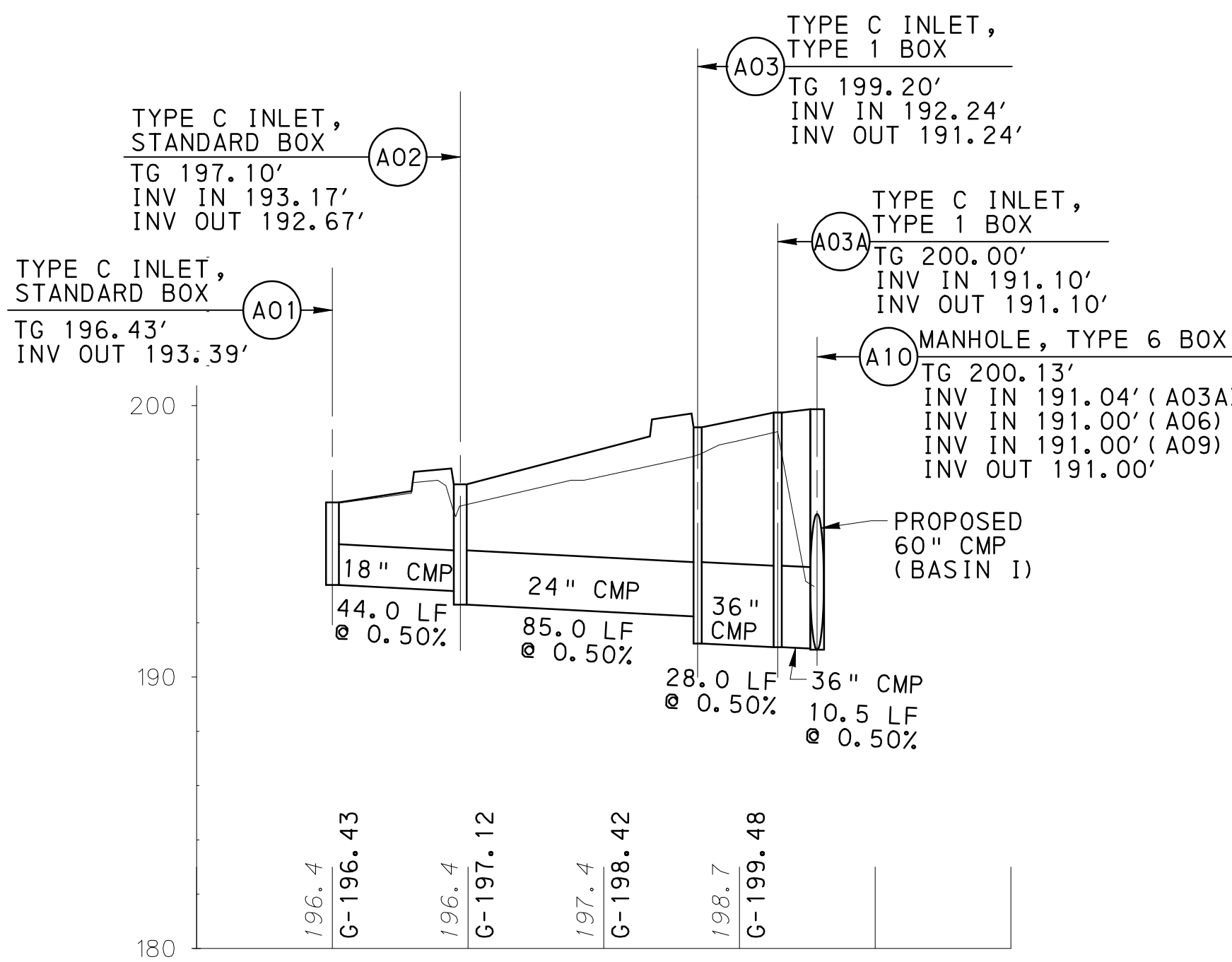
PIPE PROFILE

PROPOSED INLET B6A TO ENDWALL B6



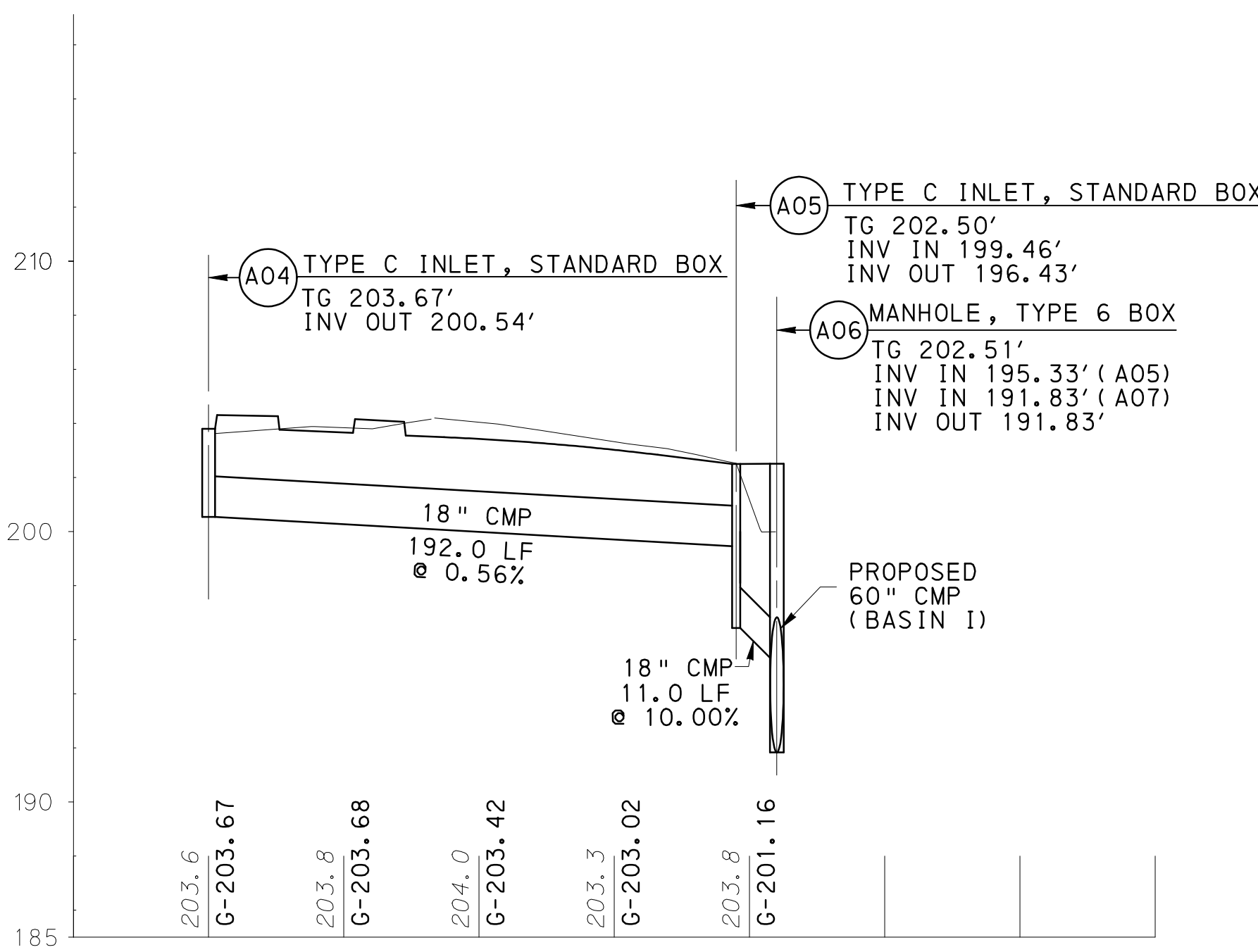
PIPE PROFILE

PROPOSED INLET B7 TO ENDWALL B8



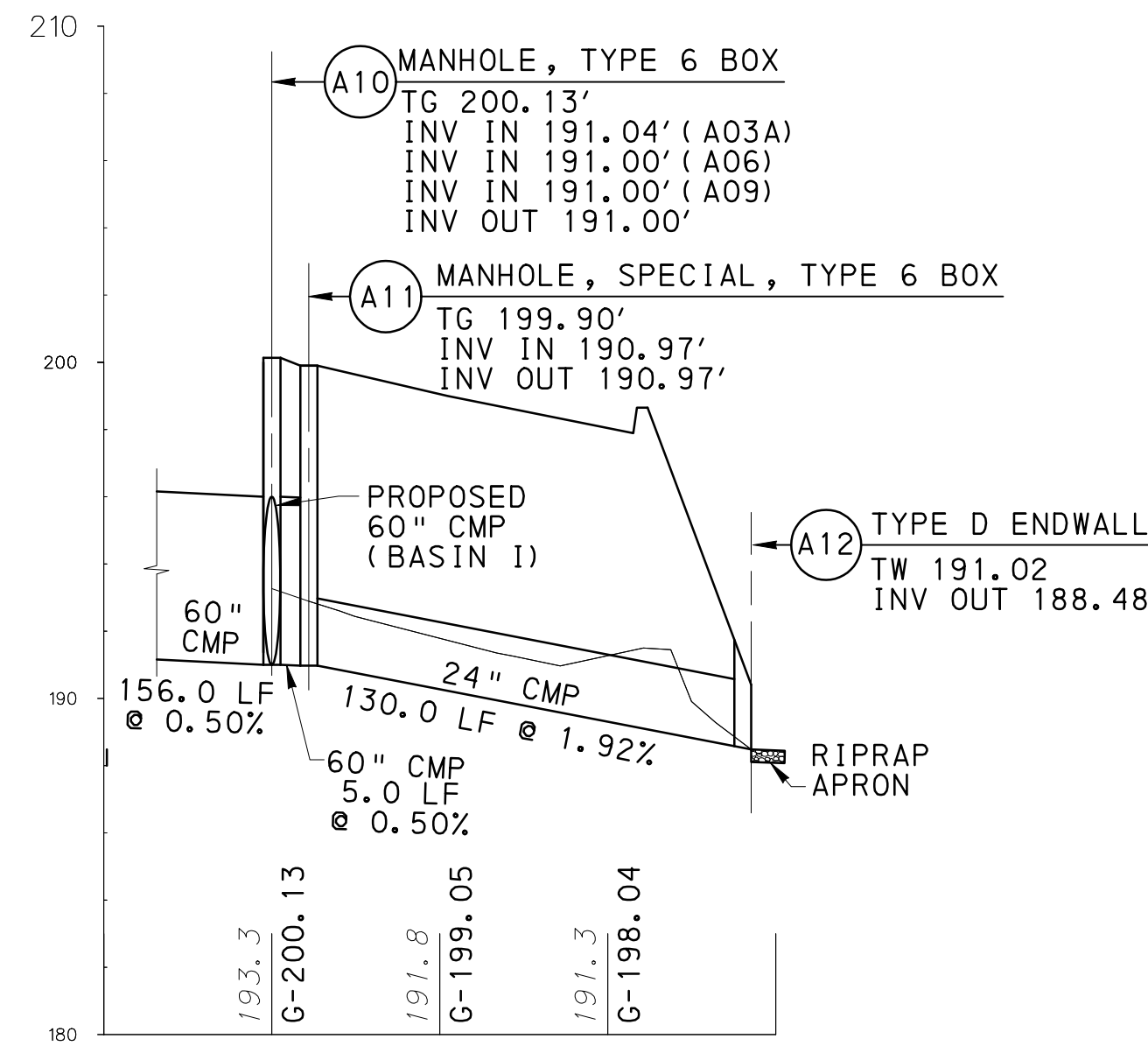
PIPE PROFILE

PROPOSED INLET A01 TO
PROPOSED MANHOLE A10



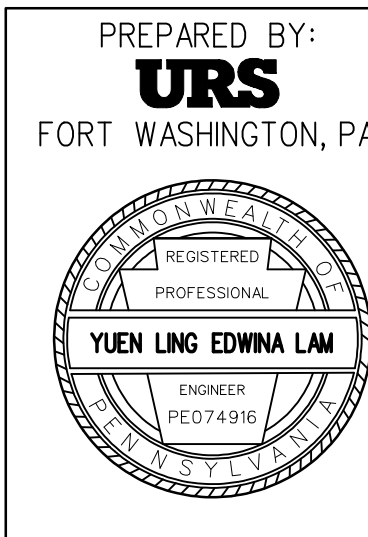
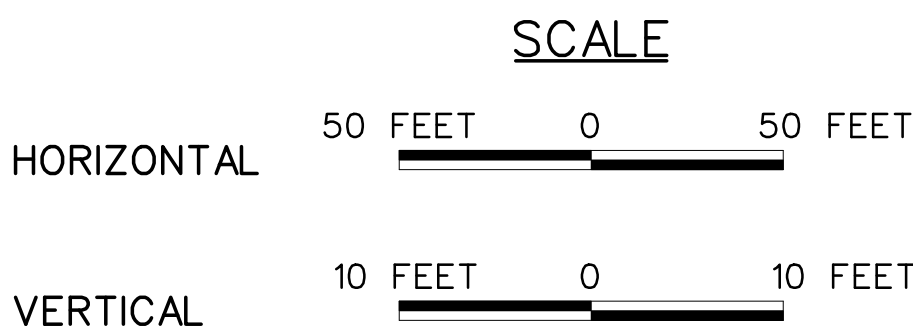
PIPE PROFILE

PROPOSED INLET A04 TO
PROPOSED MANHOLE A06



PIPE PROFILE

PROPOSED MANHOLE A10 TO
PROPOSED ENDWALL A12



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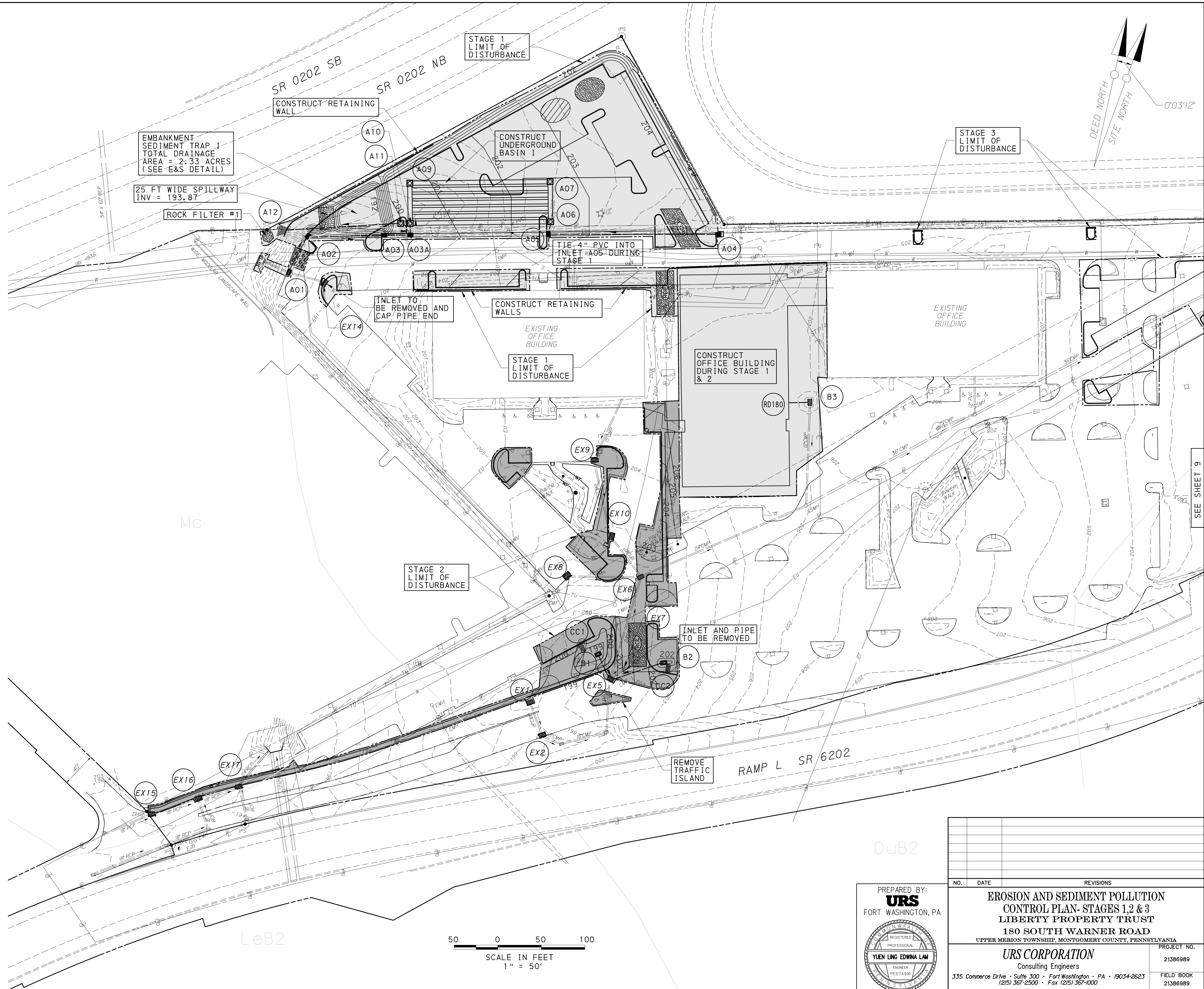
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LEGEND

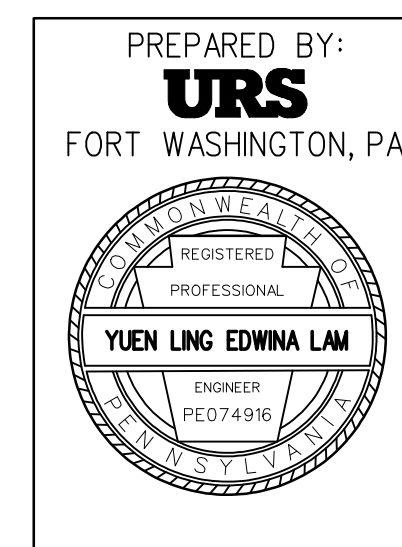
- 195 — PROPOSED CONTOURS
- 195 — EXISTING CONTOURS
- — PROPOSED DRAINAGE SYSTEM
- — EXISTING DRAINAGE SYSTEM
- EU — EXISTING UNDERGROUND ELECTRIC
- TU — EXISTING UNDERGROUND TELEPHONE
- W — EXISTING WATER LINE
- S — EXISTING SANITARY LINE
- ET — EXISTING OVERHEAD WIRE
- — EXISTING FIRE HYDRANT
- — 100 YR FEMA FLOODPLAIN BOUNDARY
- (B1) DRAINAGE STRUCTURE CALLOUT
- (S1) CHANNEL CALLOUT
- — TURF REINFORCEMENT MAT
- — RIP RAP APRON
- — FLOW ARROW
- — TYPE D ENDWALL
- — SEDIMENT FOREBAY
- — INLET PROTECTION
- — ROCK FILTER
- — TEMP INLET CAP
- — TEMP CAP PIPE
- — ROCK CONSTRUCTION ENTRANCE
- 18"SF — 18" SILT FENCE
- 30"SF — 30" SILT FENCE
- — TOPSOIL STOCKPILE
- — ROCK PILE FOR ROCK CONSTRUCTION ENTRANCE
- WF — WORK FENCE
- — LIMIT OF DISTURBANCE (STAGE 1)
- — LIMIT OF DISTURBANCE (STAGE 2)
- — LIMIT OF DISTURBANCE (STAGE 3)

NOTE:

CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT POLLUTION CONTROLS AND RELATED ITEMS INCLUDED WITHIN THIS EROSION AND SEDIMENT POLLUTION CONTROL PERMIT.



50 0 50 100
SCALE IN FEET
1" = 50'



PREPARED BY:
URS
FORT WASHINGTON, PA

NO.		DATE	REVISIONS
EROSION AND SEDIMENT POLLUTION CONTROL PLAN- STAGES 1,2 & 3 LIBERTY PROPERTY TRUST 180 SOUTH WARNER ROAD UPPER MERION TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA			
URS CORPORATION Consulting Engineers 335 Commerce Drive • Suite 300 • Fort Washington • PA • 19034-2623 (215) 367-2500 • Fax (215) 367-1000			PROJECT NO. 21386989
SCALE AS NOTED	DATE	DRAWN BY SML	CHECKED BY SML
			FIELD BOOK 21386989
			SHEET NO. 8 OF 38



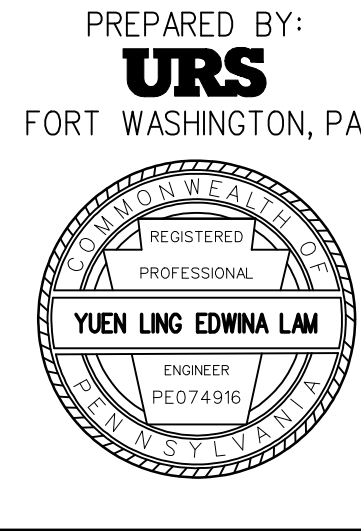
SITE ID NUMBER:
3375567

LEGEND

- 195 PROPOSED CONTOURS
- 195 EXISTING CONTOURS
- PROPOSED DRAINAGE SYSTEM
- EXISTING DRAINAGE SYSTEM
- EU EXISTING UNDERGROUND ELECTRIC
- TU EXISTING UNDERGROUND TELEPHONE
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50 0 50 100
SCALE IN FEET
1" = 50'



PREPARED BY:
URS
FORT WASHINGTON, PA

NO.	DATE	REVISIONS		
<div>EROSION AND SEDIMENT POLLUTION CONTROL PLAN- STAGES 1,2 & 3 LIBERTY PROPERTY TRUST 180 SOUTH WARNER ROAD UPPER MERION TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA</div>				
<div>URS CORPORATION Consulting Engineers 335 Commerce Drive • Suite 300 • Fort Washington • PA • 19034-2623 (215) 367-2500 • Fax (215) 367-1000</div>			PROJECT NO. 21386989	FIELD BOOK 21386989
SCALE AS NOTED	DATE	DRAWN BY SML	CHECKED BY	SHEET NO. 9 OF 38

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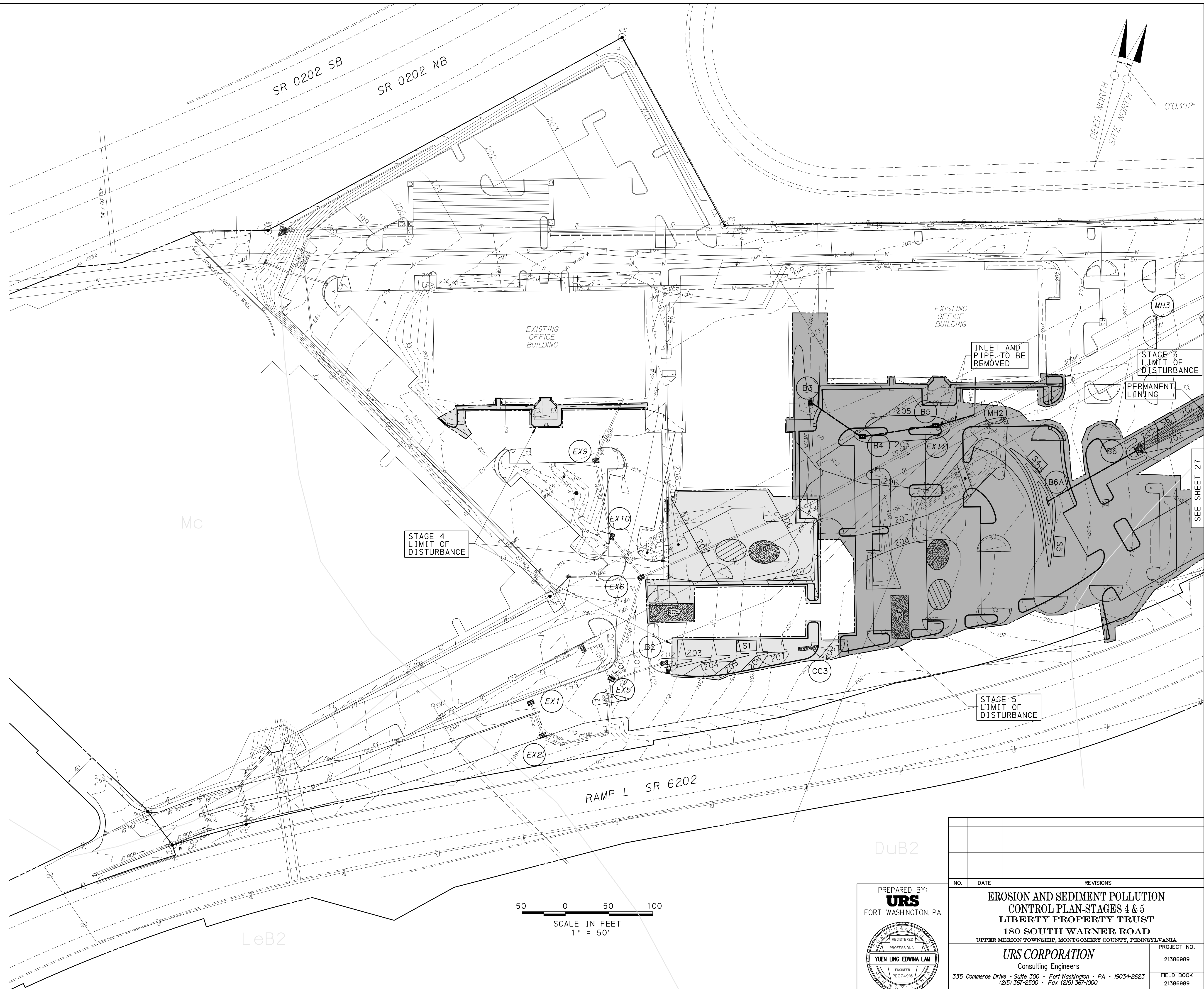


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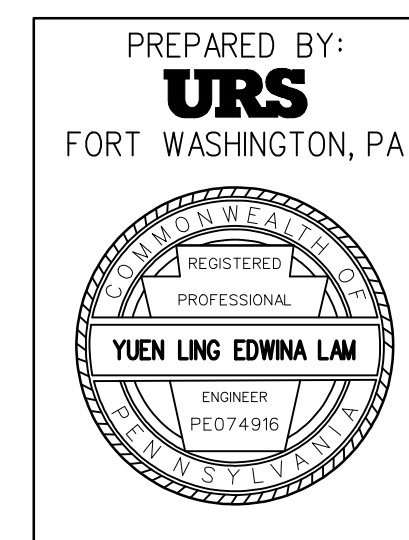
LEGEND

- 195 — PROPOSED CONTOURS
- 195 — EXISTING CONTOURS
- — PROPOSED DRAINAGE SYSTEM
- — EXISTING DRAINAGE SYSTEM
- EU — EXISTING UNDERGROUND ELECTRIC
- TU — EXISTING UNDERGROUND TELEPHONE
- W — EXISTING WATER LINE
- S — EXISTING SANITARY LINE
- ET — EXISTING OVERHEAD WIRE
- — EXISTING FIRE HYDRANT
- — 100 YR FEMA FLOODPLAIN BOUNDARY
- (B1) DRAINAGE STRUCTURE CALLOUT
- (S1) CHANNEL CALLOUT
- — TURF REINFORCEMENT MAT
- — RIP RAP APRON
- — FLOW ARROW
- — TYPE D ENDWALL
- — SEDIMENT FOREBAY
- — INLET PROTECTION
- — ROCK FILTER
- — TEMP INLET CAP
- — TEMP CAP PIPE
- — ROCK CONSTRUCTION ENTRANCE
- 18"SF — SILT BARRIER FENCE, 18" HEIGHT
- 30"SF — SILT BARRIER FENCE, 30" HEIGHT
- — TOPSOIL STOCKPILE
- — ROCK PILE FOR ROCK CONSTRUCTION ENTRANCE
- WF — WORK FENCE
- — LIMIT OF DISTURBANCE (STAGE 4)
- — LIMIT OF DISTURBANCE (STAGE 5)

NOTE:
CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT POLLUTION CONTROLS AND RELATED ITEMS INCLUDED WITHIN THIS EROSION AND SEDIMENT POLLUTION CONTROL PERMIT.



50 0 50 100
SCALE IN FEET
1" = 50'



PREPARED BY:
URS
FORT WASHINGTON, PA

NO.		DATE	REVISIONS	
EROSION AND SEDIMENT POLLUTION CONTROL PLAN-STAGES 4 & 5 LIBERTY PROPERTY TRUST 180 SOUTH WARNER ROAD UPPER MERION TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA				
URS CORPORATION Consulting Engineers 335 Commerce Drive • Suite 300 • Fort Washington • PA • 19034-2623 (215) 367-2500 • Fax (215) 367-1000			PROJECT NO. 21386989	FIELD BOOK 21386989
SCALE AS NOTED	DATE	DRAWN BY SML	CHECKED BY	SHEET NO. 10 OF 38



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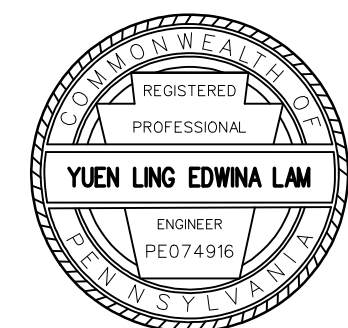
LEGEND

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- [] TURF REINFORCEMENT MAT
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NO.		DATE	REVISIONS
EROSION AND SEDIMENT POLLUTION CONTROL PLAN-STAGES 4 & 5 LIBERTY PROPERTY TRUST 180 SOUTH WARNER ROAD UPPER MERION TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA			
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			FIELD BOOK 21386989 SHEET NO. 11 OF 38

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STANDARD EROSION AND SEDIMENT POLLUTION CONTROL PLAN NOTES

NOTE: AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING BUT NOT LIMITED TO: THE LANDOWNER AND ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARED, AND THE MONTGOMERY COUNTY CONSERVATION DISTRICT TO AN ON SITE MEETING. ALSO AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR BURIED UTILITIES LOCATIONS.

THE FOLLOWING ARE GENERAL NOTES AND WILL BE INCLUDED, UPON ACCEPTANCE, IN THE CONTRACT DOCUMENTS:

1. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
2. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND / OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND / OR SEDIMENT POLLUTION.
3. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY IMPACT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE MONTGOMERY COUNTY CONSERVATION DISTRICT.
4. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE APPROPRIATE CONSERVATION DISTRICT, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND / OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.
5. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
6. SEDIMENT REMOVED FROM BMP'S SHALL BE DISPOSED OF IN LANDSCAPE AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
7. THE NPDES BOUNDARY IS EQUAL TO THE LIMITS OF DISTURBANCE OF THE SITE AND ANY OFF-SITE AREAS WITHIN THE LIMITS OF DISTURBANCE THAT ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL. OFF-SITE FACILITIES SUCH AS: UTILITIES AND ROADWAYS.
8. THE PROJECT RECEIVING WATERCOURSE IS CROW CREEK, AND THE CHAPTER 93 CLASSIFICATION IS WARM WATER FISHERY.
9. ONLY LIMITED UPSLOPE DISTURBANCE MUST BE PERMITTED TO PROVIDE ACCESS TO SEDIMENT TRAPS, ROCK FILTER DAMS, AND INTERCEPTOR CHANNELS FOR GRADING AND ACQUIRING BORROW TO CONSTRUCT THOSE CONTROLS.
10. EROSION AND SEDIMENTATION CONTROLS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE DISTURBANCE WITHIN THE TRIBUTARY AREAS OF THOSE CONTROLS.
11. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST BE STABILIZED IMMEDIATELY.
12. SEDIMENT TRAPS MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTY.
13. SEDIMENT MUST BE REMOVED FROM TRAPS WHEN SEDIMENT HAS ACCUMULATED TO THE CLEANOUT ELEVATION.
14. SILT BARRIER FENCE MUST BE INSTALLED AT LEVEL GRADE. BOTH ENDS OF EACH FENCE SECTION MUST EXTEND AT LEAST 8 FEET UPSLOPE AT 45 DEGREE TO THE MAIN FENCE ALIGNMENT.
15. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE SILT BARRIER FENCE.
16. ANY FENCE SECTION WHICH HAS BEEN UNDERMINED OR OVERTOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET. SEE ROCK FILTER OUTLET DETAIL.
17. IN ACCORDANCE WITH THE APPROVED CONSTRUCTION SEQUENCE, THE ENGINEER WILL LIMIT THE AREA OF EXCAVATION, BORROW, WASTE, AND EMBANKMENT IN PROGRESS DEPENDENT UPON THE PROGRESS OF THE CONTRACTOR'S STABILIZATION AND OTHER SPECIFIED TEMPORARY OR PERMANENT EROSION CONTROL MEASURES. THE EXTENT OF EXPOSED ERODIBLE SURFACE AREA AT ANY TIME DURING CONSTRUCTION SHALL BE LIMITED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION SEQUENCE.
18. ALL TOPSOIL FROM THE OVERALL SITE PREPARATION WILL BE STOCKPILED WHERE SHOWN ON PLAN AND STABILIZED TO PROTECT FROM EROSION. SILT BARRIER FENCE PROTECTION WILL BE INSTALLED PRIOR TO STOCKING AND ANY NECESSARY GRADING TO PREVENT SILT FROM LEAVING SITE WILL BE COMPLETED AND STABILIZED. AT THE TIME OF FINAL GRADING THE TOPSOIL SHALL BE REDISTRIBUTED UNIFORMLY THROUGHOUT THE SITE.
19. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED WITHIN THIS PERMIT.
20. STORMWATER INLETS WHICH DO NOT DISCHARGE TO SEDIMENT TRAPS OR BASINS MUST BE PROTECTED UNTIL THE TRIBUTARY AREAS ARE STABILIZED.
21. SEDIMENT MUST BE REMOVED FROM INLET PROTECTION AFTER EACH STORM EVENT.
22. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
23. CHANNELS, SEDIMENT TRAPS, AND STOCKPILE MUST BE STABILIZED IMMEDIATELY.
24. HAY OR STRAW MULCH MUST BE APPLIED AT A RATE OF AT LEAST 3.0 TONS PER ACRE.
25. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON ALL SLOPES 3:1 OR STEEPER.
26. STRAW MULCH SHALL BE APPLIED IN LONG STANDS, NOT CHOPPED OR FINELY BROKEN.

27. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.

ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMPs FAIL TO PERFORM, AS EXPECTED, REPLACEMENT BMPs OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED.

WHERE BMPs ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENT POLLUTION THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION:

- A. THE LOCATION AND SEVERITY OF THE BMP'S FAILURE AND ANY POLLUTION EVENTS.
B. ALL STEPS TAKEN TO, REDUCE, ELIMINATE AND PREVENT THE RECURRENCE OF THE NON-COMPLIANCE.
C. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.

28. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE OR STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE ALL SUCH PROBLEMS.

29. ADHERE TO ANY MANUFACTURER'S RECOMMENDATIONS FOR REPLACING SILT BARRIER FENCE FABRIC DUE TO WEATHERING.

30. WATERCOURSE CHANNELS WILL BE MAINTAINED TO ENSURE THAT THE SPECIFIED DESIGN DIMENSIONS AND STABILIZATION ARE AVAILABLE AT ALL TIMES.

31. ALL PERMANENT ROCK OUTLETS WILL BE INSPECTED, CLEANED AND REPAIRED TO FINAL ELEVATIONS AFTER ALL STORM EVENTS DURING CONSTRUCTION AND AFTER STABILIZATION IS COMPLETED.

32. SHOULD UNFORESEEN EROSION CONDITIONS DEVELOP DURING CONSTRUCTION, TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF INCREASED RUNOFF AND/OR SEDIMENT DISPLACEMENT. HOLD IN READINESS STOCKPILES OF WOOD CHIPS, HAY BALES, CRUSHED STONE AND OTHER MULCHES TO DEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OF EROSION.

33. ALL STRUCTURES ASSOCIATED WITH CONSTRUCTION OF SEDIMENT REMOVAL FACILITIES AND STORM SEWER PIPING MUST BE AVAILABLE ON-SITE PRIOR TO DISTURBING THE ASSOCIATED AREA.

34. ALL PUMPED WATER FROM CONSTRUCTION AREAS MUST BE PUMPED TO A SEDIMENT BASIN, SEDIMENT TRAP OR FILTER BAG AS SHOWN ON THE PLANS. CONTRACTOR MUST OBTAIN APPROVAL FROM THE CHESTER COUNTY CONSERVATION DISTRICT FOR ANY TYPE OF FACILITY NOT SHOWN ON THE PLANS.

35. LIMIT CLEARING AND GRUBBING OPERATIONS FOR ACCESS FOR CONSTRUCTING EROSION AND SEDIMENTATION CONTROL DEVICES TO A MAXIMUM WIDTH OF 20 FEET. PLACE 4 INCHES OF SUBBASE ON CLEARED AREA.

36. UPON COMPLETION OF SITE CONSTRUCTION AND STABILIZATION, REMOVE ALL INLET PROTECTION, SILT BARRIER FENCE, AND ROCK FILTER DAMS. SEED, MULCH AND STABILIZE ALL DISTURBED AREAS FOR WINTER SEASON CONSTRUCTION SHUT DOWN.

37. UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER MUST BE ESTABLISHED PRIOR TO REMOVAL OF ALL SEDIMENT TRAPS, SEDIMENT BASINS AND ALL EROSION AND SEDIMENT POLLUTION CONTROL DEVICE.

38. WASTE OR BORROW SOIL USED ON THE SITE MUST COME FROM A SITE WITH AN EROSION AND SEDIMENT POLLUTION CONTROL PLAN APPROVED BY THE APPROPRIATE COUNTY CONSERVATION DISTRICT.

39. DURING WINTER MONTHS (NOVEMBER TO MARCH) EARTHMOVING WILL BE PERFORMED DURING FAVORABLE WEATHER CONDITIONS.

40. MAINTAIN EXISTING TEMPORARY SLOPE PIPE DRAINS AND BERMS UNTIL CONSTRUCTION IS COMPLETED.

41. TOTAL DISTURBED AREA = 10.69 ACRES

42. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY US HISTORY, SANDBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS.

43. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLD MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)

44. ANY DAMAGE THAT OCCURS AS A RESULT OF THE BASIN OR TRAP DISCHARGE MUST BE REPAIRED IN A PERMANENT MANNER THAT IS SATISFACTORY TO THE MUNICIPALITY, CONSERVATION DISTRICT AND DOWN SLOPE LANDOWNER(S).

45. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

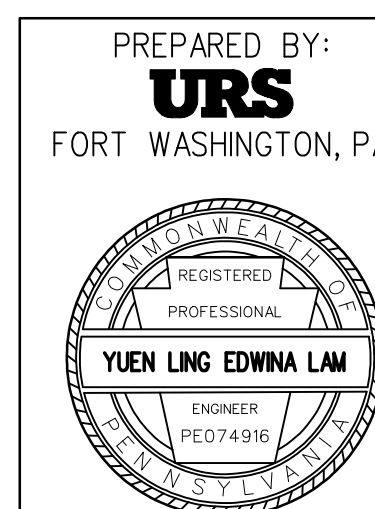
46. CONTRACTOR WILL BE RESPONSIBLE TO PREPARE AND OBTAIN A SEPARATE EROSION AND SEDIMENTATION CONTROL PERMIT FOR THE IMPORT AND EXPORT OF FILL MATERIAL.



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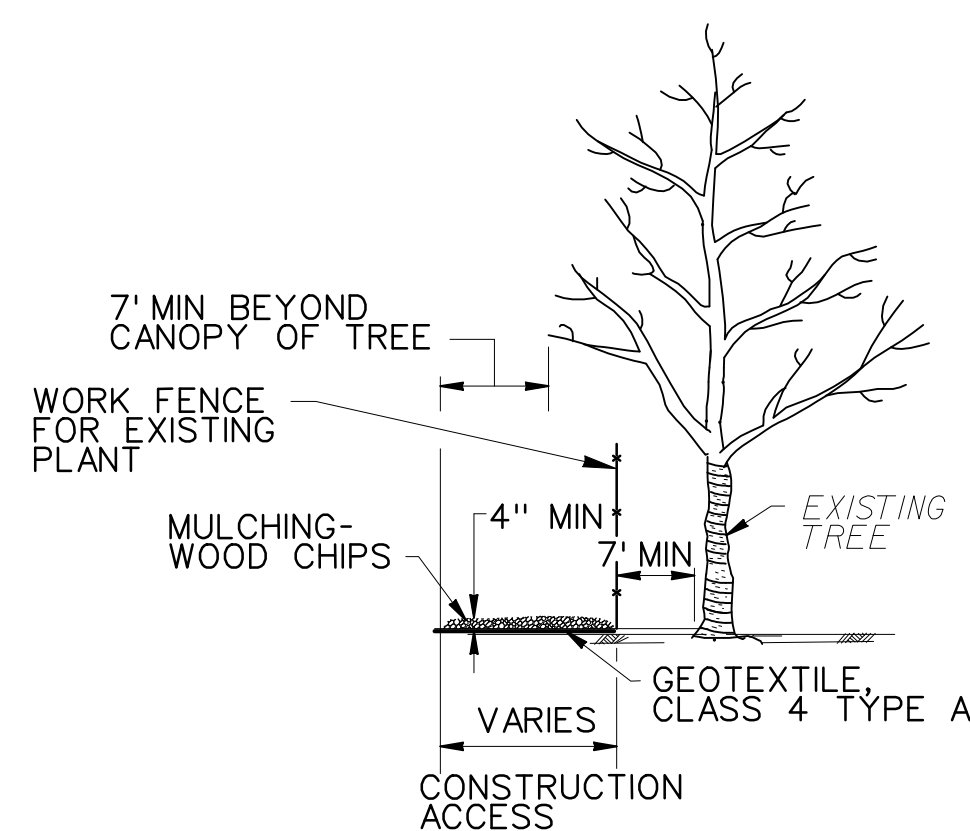
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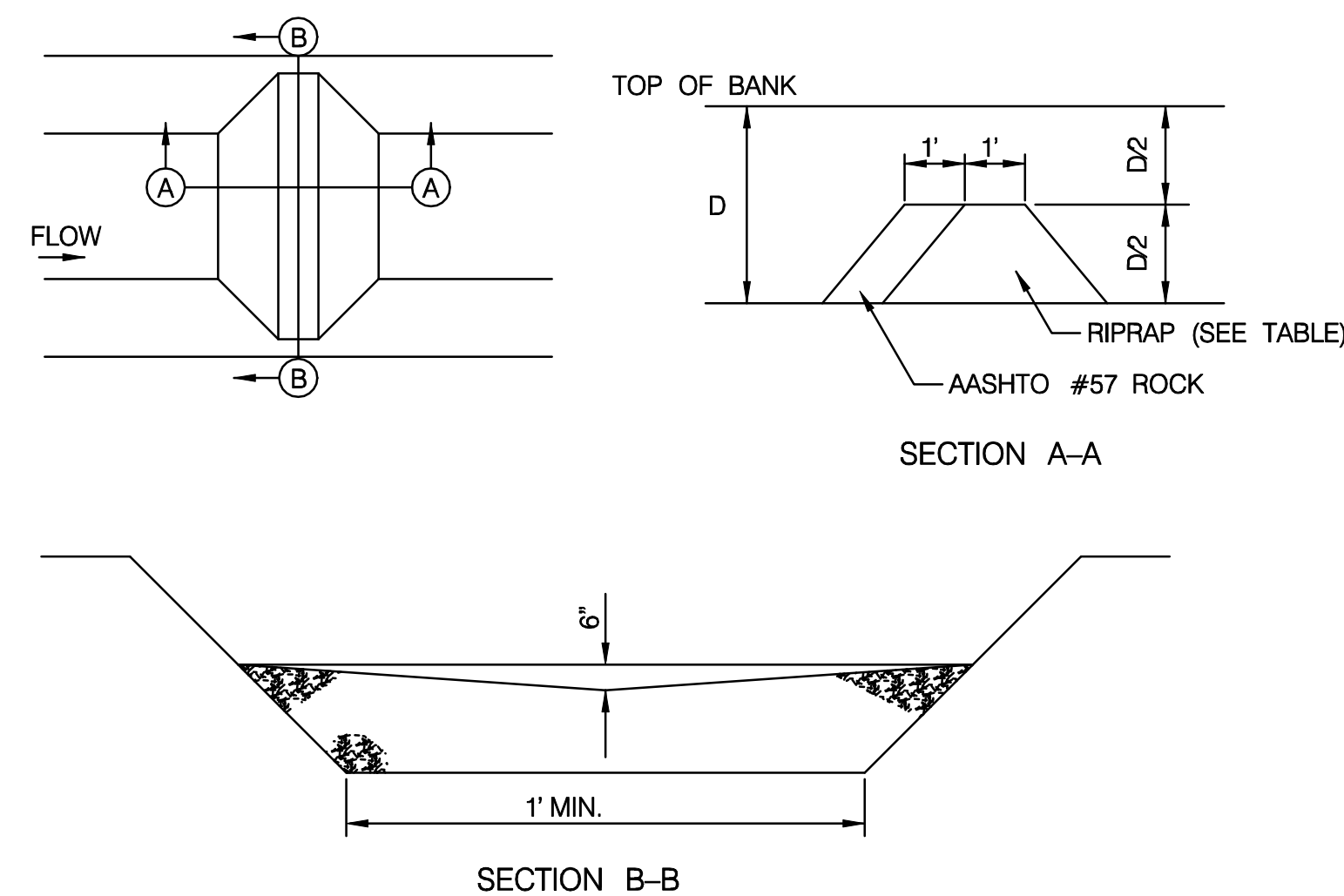
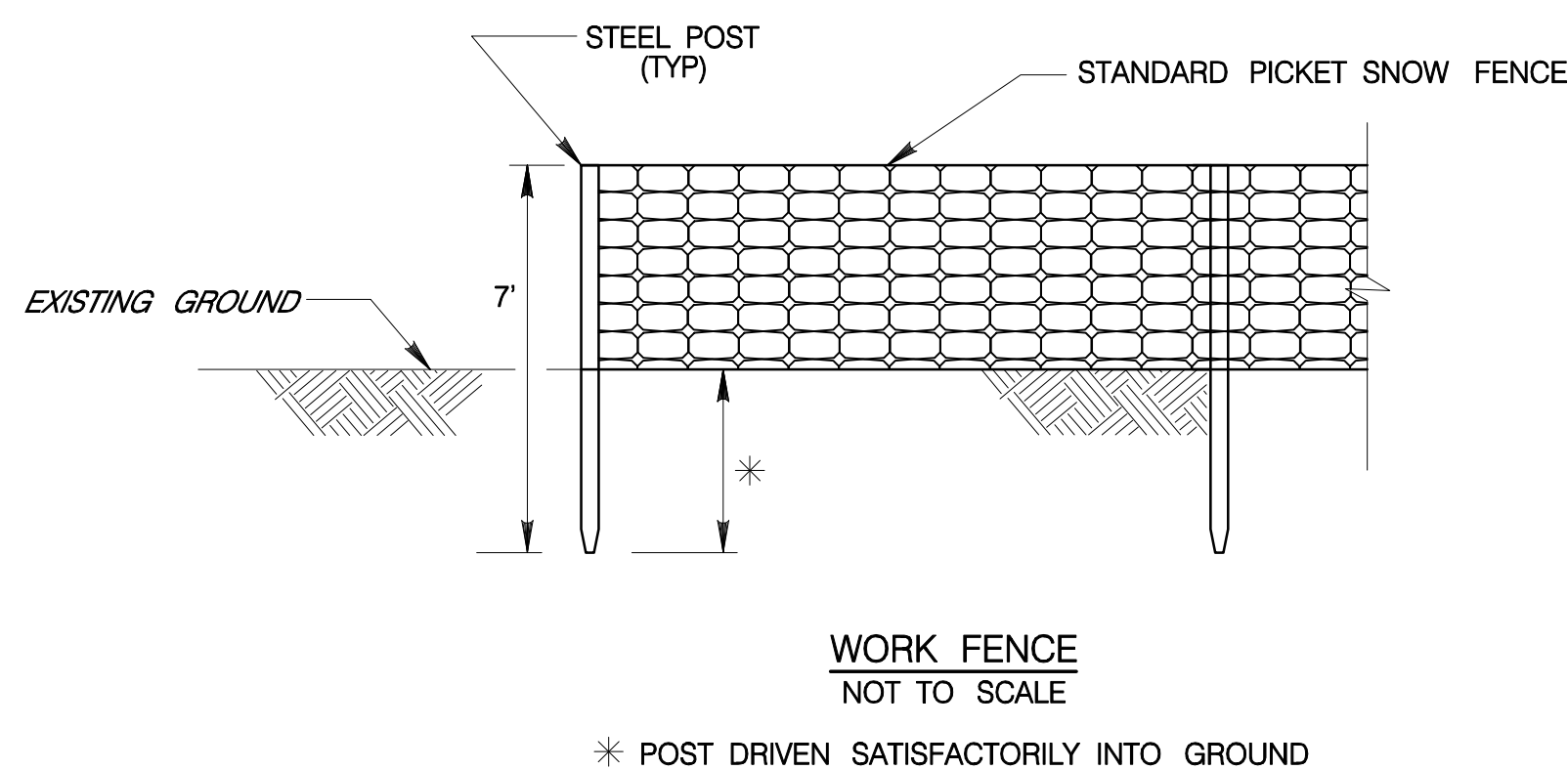
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SOIL USE LIMITATIONS AND RESOLUTIONS

SOIL TYPE	SUITABILITY OF MATERIAL FOR:				SOIL FEATURES THAT AFFECT ENGINEERING PRACTICES			RESOLUTIONS
SERIES AND MAP SYMBOL	SAND AND GRAVEL	WINTER GRADING	ROAD FILL	TOPSOIL	DRAINAGE	POND RESERVOIR AREAS	EMBANKMENTS, DIKES, AND LEVEES	
DUFFIELD SILT LOAM	POOR	FAIR TO GOOD	FAIR	GOOD	SINKHOLE DEVELOPMENT	PERMEABLE SUBSTRATUM AND EXCESSIVE SEEPAGE	LACKS STABILITY	THIS SOIL EXISTS AT THE OFFICE PARK SITE. DUFFIELD SOILS ARE SUSCEPTIBLE TO SINKHOLES. THIS SOIL IS SUITABLE FOR TOPSOIL.
DuB2								
LAWRENCEVILLE SILT LOAM	POOR	POOR	FAIR	GOOD	SEASONAL HIGH WATER TABLE	MODERATELY SLOW PERMEABILITY	UNSTABLE	THIS SOIL EXISTS AT THE OFFICE PARK ENTRANCE AND ALONG RAMP L. THIS SOIL IS SUITABLE FOR TOPSOIL.
LeB2								
MADE LAND, LIMESTONE MATERIALS	POOR	FAIR	FAIR	UNSUITABLE	-	PERMEABLE SUBSTRATUM	POOR STABILITY	THIS SOIL EXISTS AT THE LOCATION OF THE PROPOSED UNDERGROUND BASIN AS WELL AS THE LOCATION OF THE EXISTING BASIN. MADE LAND SOILS NEED TO BE REINFORCED WHEN UTILIZING THE SOIL AND IT IS UNSTABLE FOR EMBANKMENT, DIKES, AND LEVEES.
Mc								



TREE ROOT PROTECTION



ROCK FILTER NO.	LOCATION	D (FT)	RIPRAP SIZE
1	AT OUTLET A12	1	R-2
2	AT EXISTING HEADWALL EW1	3	R-3
3	AT WESTERN CORNER OF PROPERTY	1	R-2

Sediment must be removed when accumulations reach 12 the height of the filters.

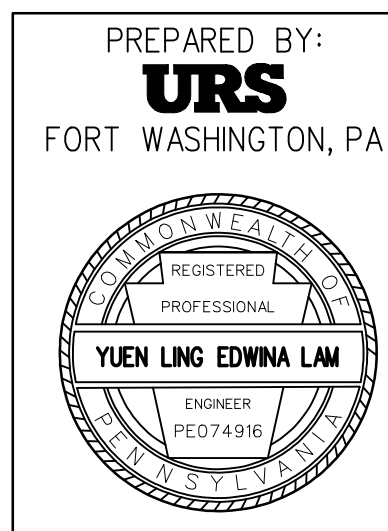
Immediately upon stabilization of each channel, remove accumulated sediment, remove Rock Filter, and stabilize disturbed areas.

ROCK FILTERS
NOT TO SCALE



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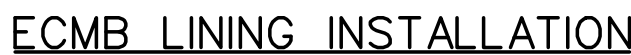
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TEMPORARY CHANNEL LININGS

SWALE ID	LOCATION ON SITE	BOTTOM WIDTH B (ft)	LT SIDE SLOPE (1:Z1)	RT SIDE SLOPE (1:Z2)	MAX DEPTH D (ft)	CHANNEL LINING	STAPLE PATTERN
S1	IN FRONT OF PROPOSED BUILDING	2.00	3	3	0.31	EROSION CONTROL MULCH BLANKET	D
S4	NORTHERN HALF OF SWALE IN FRONT OF 190 S. WARNER RD	2.00	3	3	0.33	EROSION CONTROL MULCH BLANKET	D
S5	SOUTHERN HALF OF SWALE IN FRONT OF 190 S. WARNER RD	2.00	3	3	0.54	EROSION CONTROL MULCH BLANKET	D
S6	SWALE LEADING TO BASIN II	2.00	3	3	0.87	EROSION CONTROL MULCH BLANKET	D



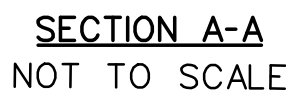
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3.4 STAPLES PER SQUARE YARD
USING 6 IN., 11 GA WIRE "U"
STAPLES. 8 IN. STAPLES AND
LONGER MAY BE USED FOR LOOSE
SOILS. 9 GA STAPLES OR HEAVIER
MAY BE NECESSARY IN HARD OR
ROCKY SOILS. SECURE BLANKETS
TO SOIL BY PLACING A
STAPLE/STAKE THROUGH EACH
YELLOW COLORED DOT.



NOTES:

1. CONSTRUCT ROCK CONSTRUCTION ENTRANCES AT ALL PROJECT ACCESS POINTS.
2. CONSTANTLY MAINTAIN STRUCTURE'S THICKNESS TO THE SPECIFIC DIMENSIONS BY ADDING ROCK. MAINTAIN A STOCKPILE ON SITE FOR THIS PURPOSE.
3. AT END OF EACH CONSTRUCTION DAY, REMOVE ALL SEDIMENT DEPOSITED ON PUBLIC ROADS & RETURN SEDIMENT TO CONSTRUCTION SITE.



NOT TO SCALE



NOT TO SCALE

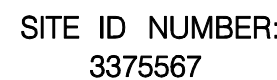
- NOTES: NOT TO SCALE
1. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH ONE THIRD THE HEIGHT OF THE OUTLET.
 2. PLACE ROCK FILTER OUTLET ALONG UPLAND STRAW BALE BARRIER AS INDICATED ON PLANS.
 3. PLACE ROCK FILTER OUTLET ALONG DOWNLAND STRAW BALE BARRIER AS INDICATED ON PLANS.
 4. ROCK FILTER OUTLETS ALSO TO BE PLACED AS NECESSARY IN THE EVENT OF STRAW BALE OR SILT FENCE BARRIER FAILURE.

ROCK FILTER OUTLET

1. SILT FENCE MUST BE INSTALLED AT EXISTING GRADE. BOTH ENDS OF FENCE MUST BE EXTENDED AT LEAST 8 FEET UPSLOPE 45° TO MAIN FENCE ALIGNMENT.
2. SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH HALF THE ABOVE GROUND FENCE HEIGHT.
3. ANY FENCE SECTION WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.
SEE ROCK FILTER OUTLET DETAIL.

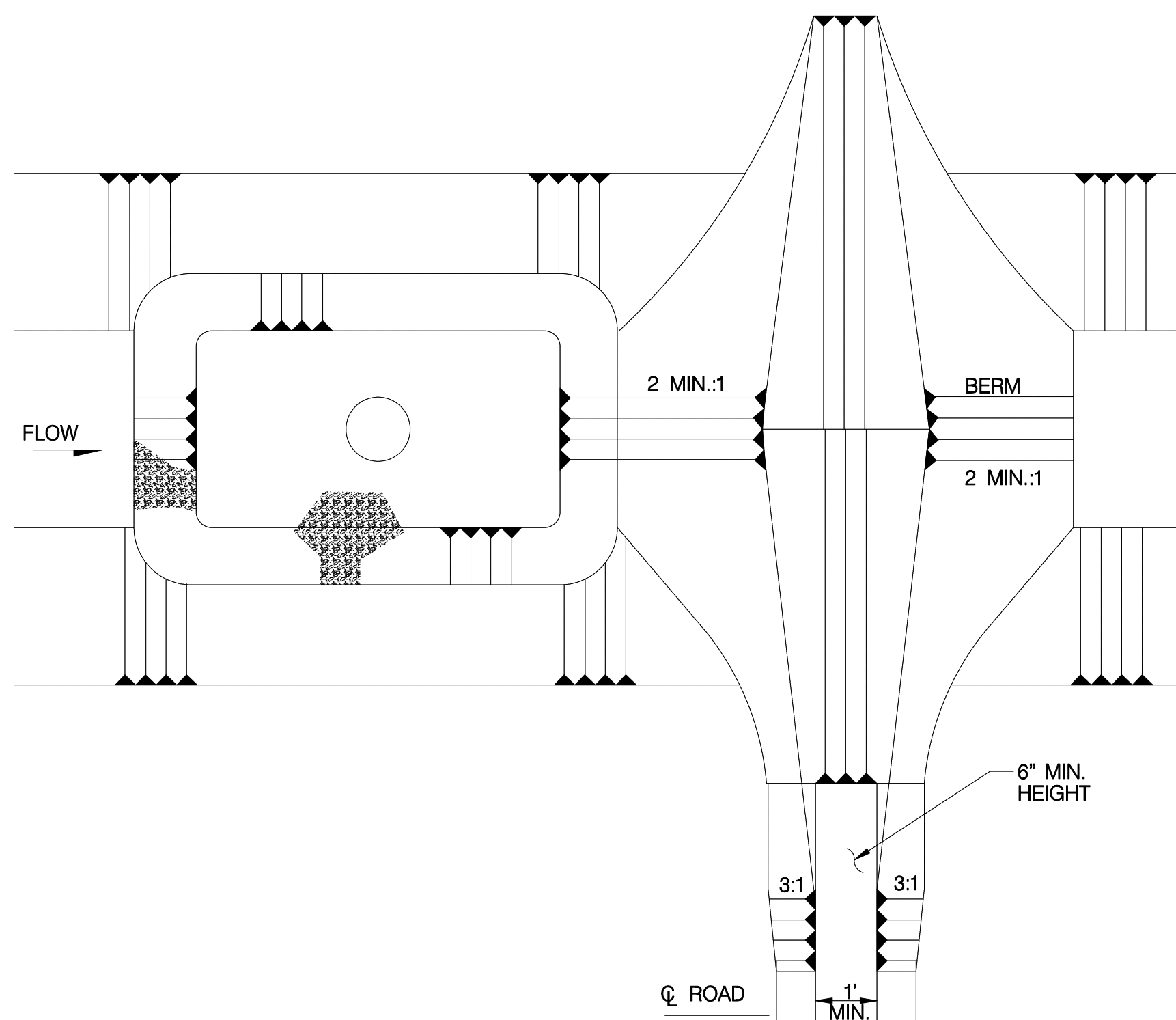
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- | INLET PROTECTION | | |
|------------------|-----------------------|----------|
| INLET NUMBER | DRAINAGE AREA (ACRES) | TYPE |
| EX1 | 0.13 | IN ROAD |
| EX5 | 0.28 | IN ROAD |
| EX6 | 0.37 | IN ROAD |
| EX7 | 0.82 | OFF ROAD |
| EX8 | 0.29 | IN ROAD |
| EX9 | 0.19 | IN ROAD |
| EX10 | 0.46 | IN ROAD |
| EX13 | 0.78 | OFF ROAD |
| EX14 | 0.24 | IN ROAD |
| EX15 | 0.11 | IN ROAD |
| EX16 | 0.15 | IN ROAD |
| EX17 | 0.17 | IN ROAD |
| A01 | 0.73 | OFF ROAD |
| B1 | 0.59 | OFF ROAD |
| B3 | 0.62 | OFF ROAD |
| B4 | 0.52 | OFF ROAD |
| B5 | 0.55 | OFF ROAD |

The technical drawings illustrate the construction of a geotextile inlet box. The **ISOMETRIC VIEW** shows a rectangular box with a width of 2', a length of 4', and a height of 3'. The **PLAN** view shows the top of the box, which is 4' wide and 2' deep. It features a central **INLET GRATE** (2' x 2') and a **LIFTING FLAP** on the right side. The **ELEVATION** view shows the side of the box, which is 3' high and 2' wide. It features a **DOUBLE STITCH SEAM** on the left side, a **#8 REBAR FOR BAG REMOVAL FROM INLET** on the right side, and a **DOUBLE STITCH SEAM** on the right side. The **INLET GRATE** is shown in the center. The **PLAN** view also shows a **SANDBAG (IF NEEDED)** and a **LIFTING FLAP** on the right side. The **ELEVATION** view shows a **2" x 2" x 3/4" RUBBER BLOCK (TYP.)** and a **1/2" NYLON ROPE EXPANSION RESTRAINT** on the left side. The **INLET BOX** is shown at the bottom. The **BERM** is shown on the right side. The **GEOTEXTILE, CLASS 3, TYPE A** is shown on the left side.

ISOMETRIC VIEW

PLAN

ELEVATION

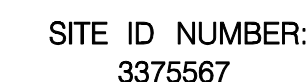
Labels in drawings include: #8 REBAR FOR BAG REMOVAL FROM INLET, DOUBLE STITCH SEAMS, INLET GRATE, LIFTING FLAP, SANDBAG (IF NEEDED), INLET GRATE, 2" x 2" x 3/4" RUBBER BLOCK (TYP.), 1/2" NYLON ROPE EXPANSION RESTRAINT, INLET BOX, GEOTEXTILE, CLASS 3, TYPE A, BERM, 2 MIN, 1 MIN, 1.

Diagram illustrating the construction of a temporary inlet and pipe cap. The structure is shown in cross-section, featuring a central inlet box. The inlet box is supported by a 6"x4"x1" steel plate. The structure is braced with 2"x4" braces. The exterior is covered with 3/4" exterior grade plywood. The interior is filled with backfill material. The structure is supported by sandbags (for use with type C inlets). The diagram also shows the limit of the pipe trench and the finished pavement.

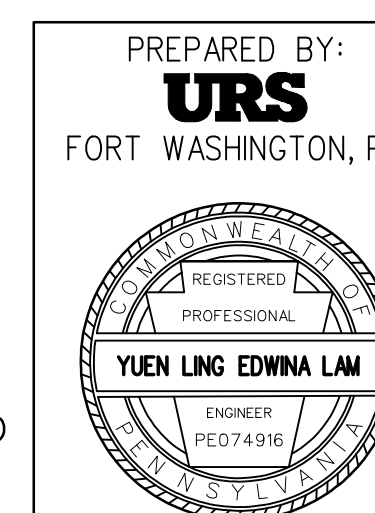
Labels in the diagram include:

- BACKFILL WITH SUITABLE MATERIAL
- SANDBAG (FOR USE WITH TYPE C INLETS)
- 6"x4"x1" STEEL PLATE
- FINISHED PAVEMENT
- LIMIT OF PIPE TRENCH
- 2"x4" BRACE
- 3/4" EXTERIOR GRADE PLYWOOD
- INLET BOX

TEMPORARY INLET AND PIPE CAP
NOT TO SCALE



NOTE:
CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER
CONSTRUCTION, STABILIZATION AND MAINTENANCE OF
ALL EROSION AND SEDIMENT POLLUTION CONTROLS AND
RELATED ITEMS INCLUDED WITHIN THIS EROSION AND
SEDIMENT POLLUTION CONTROL PERMIT.



NO.	DATE	REVISIONS			
<div>EROSION & SEDIMENT POLLUTION CONTROL DETAILS LIBERTY PROPERTY TRUST 180 SOUTH WARNER ROAD UPPER MERION TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA</div>					
<div>URS CORPORATION Consulting Engineers 335 Commerce Drive • Suite 300 • Fort Washington • PA • 19034-2623 (215) 367-2500 • Fax (215) 367-1000</div>					<div>PROJECT NO. 21386989</div> <div>FIELD BOOK 21386989</div>
SCALE AS NOTED	DATE	DRAWN BY SML	CHECKED BY	SHEET NO. 6 OF 38	

CONSTRUCTION SEQUENCE FOR SOIL EROSION CONTROL

NOTE:

PA ONE CALL MUST BE NOTIFIED PRIOR TO THE START OF ANY EARTHMOVING ACTIVITIES.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND THE MONTGOMERY COUNTY CONSERVATION DISTRICT TO AN ON-SITE MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR BURIED UTILITIES LOCATIONS.

STAGE 1

1. INSTALL 30" SILT FENCE AND 18" SILT FENCE AS INDICATED IN THE PLANS.
2. INSTALL ROCK CONSTRUCTION ENTRANCE AS INDICATED IN THE PLANS.
3. INSTALL INLET PROTECTION ON THE EXISTING INLETS A01, B3, EX1, EX2, EX5, EX6, EX10, AND EX14 AS SHOWN ON THE PLANS.
4. PERFORM ADVANCE CLEARING AND GRUBBING OPERATIONS WITHIN STAGE LIMIT OF DISTURBANCE.
5. CONSTRUCT AND STABILIZE 150' PORTION OF RETAINING WALL ALONG THE PARKING LOT FROM THE NORTHEAST CORNER TO THE EXISTING HEADWALL. TEMPORARY PUMPING MUST BE PROVIDED SHOULD THE FOUNDATION PIT FOR THE PROPOSED WALL BECOME INUNDATED WITH RUNOFF AFTER STORM EVENT. DISCHARGE INTO A SEDIMENT FILTER BAG. CONSTRUCT AND STABILIZE SEDIMENT TRAP I AND SPILLWAY. LIMIT CLEARING AND GRUBBING OPERATIONS TO AREAS NEEDED FOR SEDIMENT TRAP INSTALLATION. SEDIMENT TRAP TO BE STABILIZED AND FUNCTIONING PROPERLY PRIOR TO ANY FURTHER EARTH DISTURBANCE ACTIVITIES. SEDIMENT TRAP MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCHING. SEE SEEDING AND MULCHING NOTES SHEET.
6. CONSTRUCT AND STABILIZED UNDERGROUND STORMWATER MANAGEMENT BASIN SYSTEM A06, A07, A09, A10 AND A11. CONSTRUCT AND STABILIZE STORM SEWER SYSTEM A02, A03, A03A, A04 AND A05 AS SHOWN ON THE PLANS. CONNECT EXISTING 4. 9/32 PVC PIPE INTO INLET STRUCTURE A05. TEMPORARILY CAP INLETS A02, A03, A03A, A04 AND A05 TO PREVENT STORMWATER FROM ENTERING SYSTEM. SEE EROSION AND SEDIMENT POLLUTION CONTROL DETAIL.
7. CONSTRUCT AND STABILIZE UPPER PORTION OF PARKING LOT UP TO THE TOP OF THE SEDIMENT TRAP I INCLUDING CURBING, PAVEMENT, DRIVEWAYS, LIGHTING AND LANDSCAPING. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCHING. SEE SEEDING AND MULCHING NOTES AND LANDSCAPING NOTES AND PLANS.
8. CONSTRUCT AND STABILIZE OFFICE BUILDING. CONSTRUCT GREEN ROOF. SEE BUILDING PLANS FOR GREEN ROOF CONSTRUCTION. STABILIZE GREEN ROOF WITH PERMANENT PLANTING. SEE LANDSCAPING NOTES AND PLANS. CONNECT ROOF DRAIN TO EXISTING STORM SEWER B3.
9. CONSTRUCT AND STABILIZE THE RETAINING WALL IN THE BACK OF EXISTING BUILDING (170 SOUTH WARNER ROAD). TEMPORARY PUMPING MUST BE PROVIDED SHOULD THE FOUNDATION PIT FOR THE PROPOSED WALL BECOME INUNDATED WITH RUNOFF AFTER STORM EVENT. DISCHARGE INTO SEDIMENT TRAP 1.
10. REMOVE EXISTING INLET EX14 AND CAP THE PIPE AT THE END. CONSTRUCT AND STABILIZE THE PARKING LOT IN THE BACK OF THE EXISTING AND PROPOSED BUILDING INCLUDING CURBING, PAVEMENT, PARKING LOT, LIGHTING AND LANDSCAPING. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCHING. SEE SEEDING AND MULCHING NOTES AND LANDSCAPING NOTES AND PLANS.
11. INSTALL ROCK FILTER #1 AS SHOWN ON THE PLANS.
12. REMOVE EMBANKMENT SEDIMENT TRAP I. REMOVE DOWNSTREAM EXISTING PIPE FROM INLET A01 AND EXISTING HEADWALL. CONSTRUCT AND STABILIZE STORM SEWER SYSTEM A01 TO A02 AND OUTLET PIPE OF UNDERGROUND STORMWATER MANAGEMENT BASIN A11 AND A12. CONSTRUCT AND STABILIZE THE REMAINING PORTION OF THE RETAINING WALL. INSTALL RIPRAP APRON AT THE OUTLET OF A12.
13. CONSTRUCT AND STABILIZE THE REMAINING PORTION OF PARKING LOT INCLUDING CURBING, PAVEMENT, DRIVEWAY, TRASH AREA, LIGHTING AND LANDSCAPING. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCHING. SEE SEEDING AND MULCHING NOTES AND LANDSCAPING NOTES AND PLANS.
14. REMOVE TEMPORARY INLET CAPS. REMOVE INLET PROTECTION ON INLETS A01 AND EX14, ROCK CONSTRUCTION ENTRANCE, 18" AND 30" SILT FENCE AND ROCK FILTER #1 AS SHOWN ON THE PLANS UPON ESTABLISHMENT OF PERMANENT VEGETATION AND SITE STABILIZATION. AREAS DISTURBED DURING THE REMOVAL OF DEVICES MUST BE STABILIZED IMMEDIATELY. SEE SEEDING AND MULCHING NOTES.

STAGE 2

1. INSTALL WORK FENCE AROUND THE EXISTING TREES AS SHOWN ON THE PLANS.
2. INSTALL INLET PROTECTION ON THE EXISTING INLETS EX 8, EX9, EX15, EX16, AND EX17 AS SHOWN ON THE PLANS.
3. INSTALL 18" SILT FENCE ALONG THE ENTRANCE DRIVEWAY AS INDICATED IN THE PLANS.
4. INSTALL ROCK CONSTRUCTION ENTRANCE AS INDICATED IN THE PLANS.
5. PERFORM ADVANCE CLEARING AND GRUBBING OPERATIONS WITHIN STAGE LIMIT OF DISTURBANCE.
6. CONTINUE THE CONSTRUCTION OF OFFICE BUILDING.
7. CONSTRUCT AND STABILIZE STORM SEWER SYSTEM EX5, B1 AND B2 AS SHOWN ON THE PLANS. INSTALL INLET PROTECTION. CONSTRUCT AND STABILIZE PORTION OF SWALE S1 AND INSTALL PVC LINER AS SHOWN ON THE PLANS. SHOP DRAWINGS FOR THE PVC LINER AND GEOSYNTHETIC FABRIC ARE TO BE SUBMITTED TO THE TOWNSHIP FOR REVIEW PRIOR TO INSTALLATION. A LINER MANUFACTURER REPRESENTATIVE IS TO BE PRESENT TO CERTIFY INSTALLATION OF THE LINER AND THE SEALING OF THE SEAMS.
8. REMOVE EXISTING INLET EX7 AND EXISTING PIPE FROM EX7 TO EX5.
9. CONSTRUCT AND STABILIZE PARKING LOT INCLUDING CURBING, CURB RAMP, SIDEWALK, CURB CUT CC2, PAVEMENT, DRIVEWAY, LIGHTING AND LANDSCAPING. INSTALL RIPRAP APRON AT THE END OF CURB CUT CC2 AS SHOWN ON THE PLANS. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCHING. SEE SEEDING AND MULCHING NOTES AND LANDSCAPING NOTES AND PLANS.
10. REMOVE INLET PROTECTION ON INLETS B1, EX8, EX15, EX16, AND EX17, ROCK CONSTRUCTION ENTRANCE, WORK FENCE FOR EXISTING TREE PROTECTION AND 18" SILT FENCE AS SHOWN ON THE PLANS UPON ESTABLISHMENT OF PERMANENT VEGETATION AND SITE STABILIZATION. AREAS DISTURBED DURING THE REMOVAL OF DEVICES MUST BE STABILIZED IMMEDIATELY. SEE SEEDING AND MULCHING NOTES.

STAGE 3

1. INSTALL WORK FENCE AROUND THE STAGE LIMIT OF DISTURBANCE.
2. INSTALL ROCK FILTER #2 AND #3 AS SHOWN ON THE PLANS.
3. INSTALL INLET PROTECTION ON THE EXISTING INLET EX13.
4. INSTALL ROCK CONSTRUCTION ENTRANCE AS INDICATED IN THE PLANS.
5. CONSTRUCT AND STABILIZE SEDIMENT TRAP II AND SPILLWAY. LIMIT CLEARING AND GRUBBING OPERATION TO AREAS NEEDED FOR SEDIMENT TRAP II INSTALLATION. SEDIMENT TRAP TO BE STABILIZED AND FUNCTIONING PROPERLY PRIOR TO ANY FURTHER EARTH DISTURBANCE ACTIVITIES. SEDIMENT TRAP MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES.
6. PERFORM ADVANCE CLEARING AND GRUBBING OPERATIONS WITHIN STAGE LIMIT OF DISTURBANCE.
7. CONSTRUCT AND STABILIZE STORM SEWER B7 AND B8. INSTALL RIPRAP APRON AT THE END OF HEADWALL B8. CONSTRUCT AND STABILIZE PORTION OF SWALE S6 AND PVC LINER AS SHOWN ON THE PLANS. SHOP DRAWINGS FOR THE PVC LINER AND GEOSYNTHETIC FABRIC ARE TO BE SUBMITTED TO THE TOWNSHIP FOR REVIEW PRIOR TO INSTALLATION. A LINER MANUFACTURER REPRESENTATIVE IS TO BE PRESENT TO CERTIFY INSTALLATION OF THE LINER AND THE SEALING OF THE SEAMS. INSTALL THE TURF REINFORCEMENT MAT AS SHOWN ON THE PLANS. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCH. SEE SEEDING AND MULCHING NOTES.
8. REGRADE THE LEFT SIDE OF EXISTING SWALE S8 AS SHOWN ON THE PLANS. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCH. SEE SEEDING AND MULCHING NOTES.
9. CONSTRUCT AND STABILIZE THE PARKING LOT INCLUDING CURBING, PAVEMENT, DRIVEWAY, TRASH AREA, LIGHTING AND LANDSCAPING. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCHING. SEE SEEDING AND MULCHING NOTES AND LANDSCAPING NOTES AND PLANS.
10. REMOVE INLET PROTECTION ON INLETS EX13 AND ROCK CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS UPON ESTABLISHMENT OF PERMANENT VEGETATION AND SITE STABILIZATION. AREAS DISTURBED DURING THE REMOVAL OF DEVICES MUST BE STABILIZED IMMEDIATELY. SEE SEEDING AND MULCHING NOTES.

STAGE 4

1. INSTALL ROCK CONSTRUCTION ENTRANCE AS INDICATED IN THE PLANS.
2. PERFORM ADVANCE CLEARING AND GRUBBING OPERATIONS WITHIN STAGE LIMIT OF DISTURBANCE.
3. CONSTRUCT AND STABILIZE THE REMAINING PORTION OF SWALE S1 AND PVC LINER AS SHOWN ON THE PLANS. SHOP DRAWINGS FOR THE PVC LINER AND GEOSYNTHETIC FABRIC ARE TO BE SUBMITTED TO THE TOWNSHIP FOR REVIEW PRIOR TO INSTALLATION. A LINER MANUFACTURER REPRESENTATIVE IS TO BE PRESENT TO CERTIFY INSTALLATION OF THE LINER AND THE SEALING OF THE SEAMS. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCH. SEE SEEDING AND MULCHING NOTES.
4. CONSTRUCT AND STABILIZE PARKING LOT INCLUDING CURBING, CURB RAMP, SIDEWALK, CURB CUT CC3, PAVEMENT, DRIVEWAY, LIGHTING AND LANDSCAPING. INSTALL RIPRAP APRON AT THE END OF CURB CUT CC3. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCHING. SEE SEEDING AND MULCHING NOTES AND LANDSCAPING NOTES AND PLANS.
5. REMOVE INLET PROTECTION ON INLETS B2, EX1, EX2, EX5, EX6, EX9 AND EX10, AND ROCK CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS UPON ESTABLISHMENT OF PERMANENT VEGETATION AND SITE STABILIZATION. AREAS DISTURBED DURING THE REMOVAL OF DEVICES MUST BE STABILIZED IMMEDIATELY. SEE SEEDING AND MULCHING NOTES.

STAGE 4

1. INSTALL ROCK CONSTRUCTION ENTRANCE AS INDICATED IN THE PLANS.
2. PERFORM ADVANCE CLEARING AND GRUBBING OPERATIONS WITHIN STAGE LIMIT OF DISTURBANCE.
3. REMOVE EXISTING INLET EX12 AND THE EXISTING DOWNSTREAM PIPE. CONSTRUCT AND STABILIZE STORM SEWER SYSTEM B3, B4 AND B5 AS SHOWN ON THE PLANS. CONNECT PIPE FROM B5 TO THE EXISTING EX12 INVERT. RE-CONNECT ROOF DRAIN TO B3. CONNECT PROPOSED PIPE FROM B5 TO EXISTING MANHOLE MH2. INSTALL INLET PROTECTION.

CONSTRUCT AND STABILIZE THE REMAINING PORTION OF SWALE S6 AND PVC LINER AS SHOWN ON THE PLANS. SHOP DRAWINGS FOR THE PVC LINER AND GEOSYNTHETIC FABRIC ARE TO BE SUBMITTED TO THE TOWNSHIP FOR REVIEW PRIOR TO INSTALLATION. A LINER MANUFACTURER REPRESENTATIVE IS TO BE PRESENT TO CERTIFY INSTALLATION OF THE LINER AND THE SEALING OF THE SEAMS. INSTALL TURF REINFORCEMENT MAT AS SHOWN ON THE PLANS. CONSTRUCT AND STABILIZE STORM SEWER SYSTEM B6A AND B6. INSTALL RIPRAP AT THE END OF THE HEADWALL B6. CONSTRUCT AND STABILIZE SWALE S4 S5 AND PVC LINER. SHOP DRAWINGS FOR THE PVC LINER AND GEOSYNTHETIC FABRIC ARE TO BE SUBMITTED TO THE TOWNSHIP FOR REVIEW PRIOR TO INSTALLATION. A LINER MANUFACTURER REPRESENTATIVE IS TO BE PRESENT TO CERTIFY INSTALLATION OF THE LINER AND THE SEALING OF THE SEAMS. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCH. SEE SEEDING AND MULCHING NOTES.
5. INSTALLATION. A LINER MANUFACTURER REPRESENTATIVE IS TO BE PRESENT TO CERTIFY INSTALLATION OF THE LINER AND THE SEALING OF THE SEAMS. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCH. SEE SEEDING AND MULCHING NOTES.

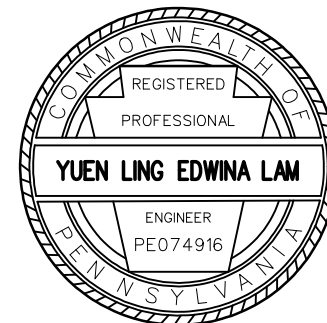
CONSTRUCT AND STABILIZE PARKING LOT INCLUDING CURBING, CURB RAMP, SIDEWALK, CURB CUT CC4, PAVEMENT, DRIVEWAY, LIGHTING AND LANDSCAPING. INSTALL RIPRAP APRON AT THE END OF CURB CUT CC4. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCHING. SEE SEEDING AND MULCHING NOTES AND LANDSCAPING NOTES AND PLANS.

UPON OBTAINING 70% UNIFORM STABILIZATION WITHIN THE DRAINAGE AREA OF SEDIMENT TRAP II, CONVERT SEDIMENT TRAP II TO PERMANENT STORMWATER MANAGEMENT BASIN. TEMPORARY PUMPING MUST BE PROVIDED FOR THE RUNOFF AFTER STORM EVENT. DISCHARGE INTO A SEDIMENT FILTER BAG. INSTALL SEDIMENT FOREBAY BERM, PERMEABLE BLOCK PAVERS, PVC LINER, AND BASIN PLANTINGS. CONTRACTOR IS RESPONSIBLE TO DETERMINE THE TYPE OF EXISTING PERMANENT LINING UNDER THE EXISTING BASIN. ALTERNATIVE LINING FOR PROPOSED BASIN MUST BE SUBMITTED TO UPPER MERION TOWNSHIP FOR APPROVAL. SHOP DRAWINGS FOR THE PVC LINER AND GEOSYNTHETIC FABRIC ARE TO BE SUBMITTED TO THE TOWNSHIP FOR REVIEW PRIOR TO INSTALLATION. A LINER MANUFACTURER REPRESENTATIVE IS TO BE PRESENT TO CERTIFY INSTALLATION OF THE LINER AND THE SEALING OF THE SEAMS. STABILIZE DISTURBED AREA IMMEDIATELY WITH PROPER SEEDING AND MULCHING. SEE SEEDING AND MULCHING NOTES AND LANDSCAPING NOTES AND PLANS.

REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES UPON ESTABLISHMENT OF PERMANENT VEGETATION AND SITE STABILIZATION. AREAS DISTURBED DURING THE REMOVAL OF DEVICES MUST BE STABILIZED IMMEDIATELY. SEE SEEDING AND MULCHING NOTES.

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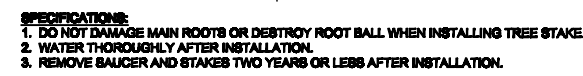
PREPARED BY:
URS
FORT WASHINGTON, PA



SITE ID NUMBER:
3375567



TYPICAL DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

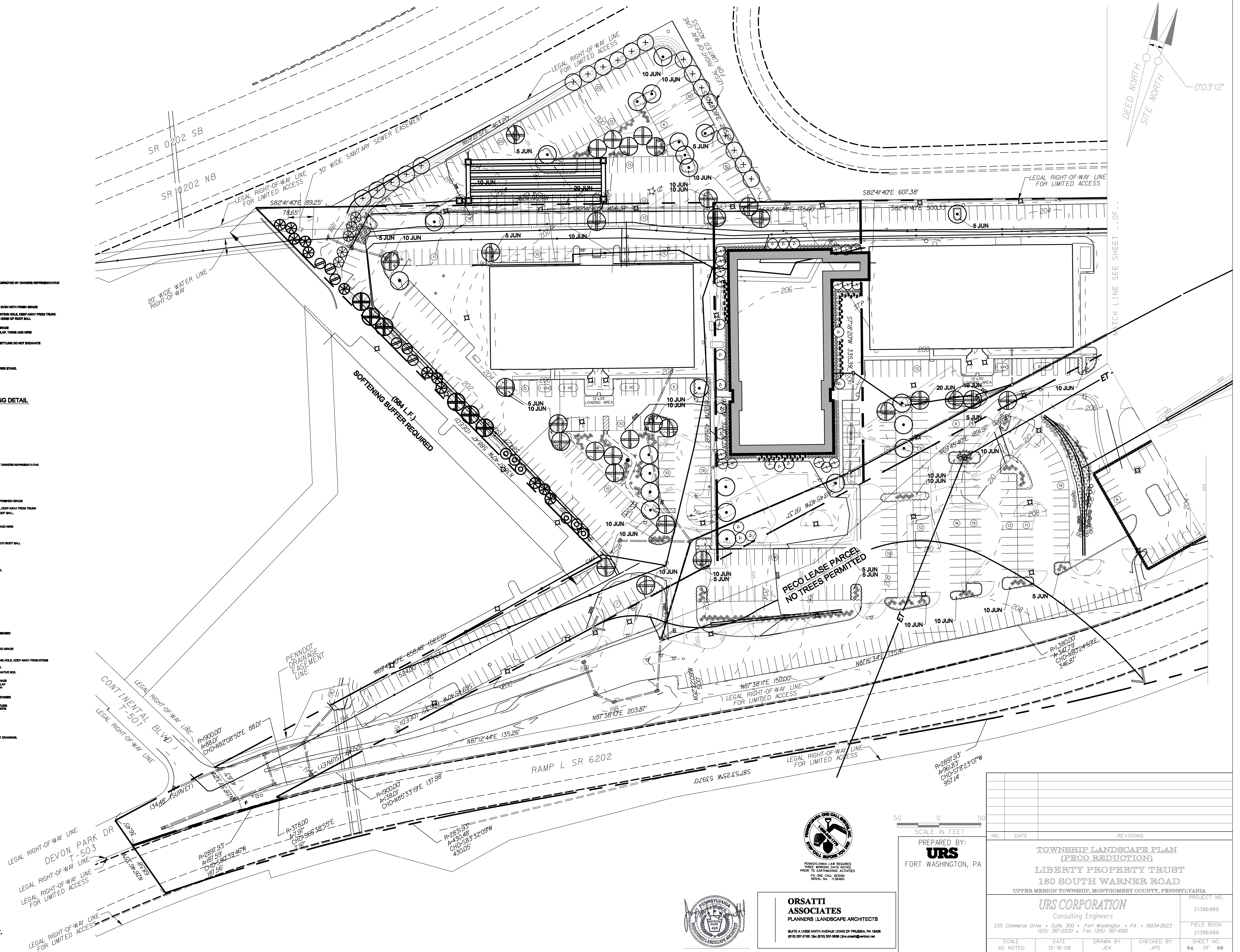


TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



TYPICAL SHRUB PLANTING DETAIL
NOT TO SCALE

**NOTE: THIS PLAN TO BE USED FOR LANDSCAPE PURPOSES ONLY.
SEE LP-2 FOR PLANT SCHEDULE AND TOWNSHIP CHART**

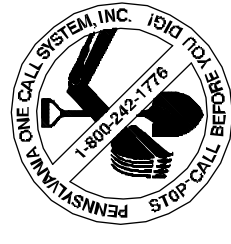
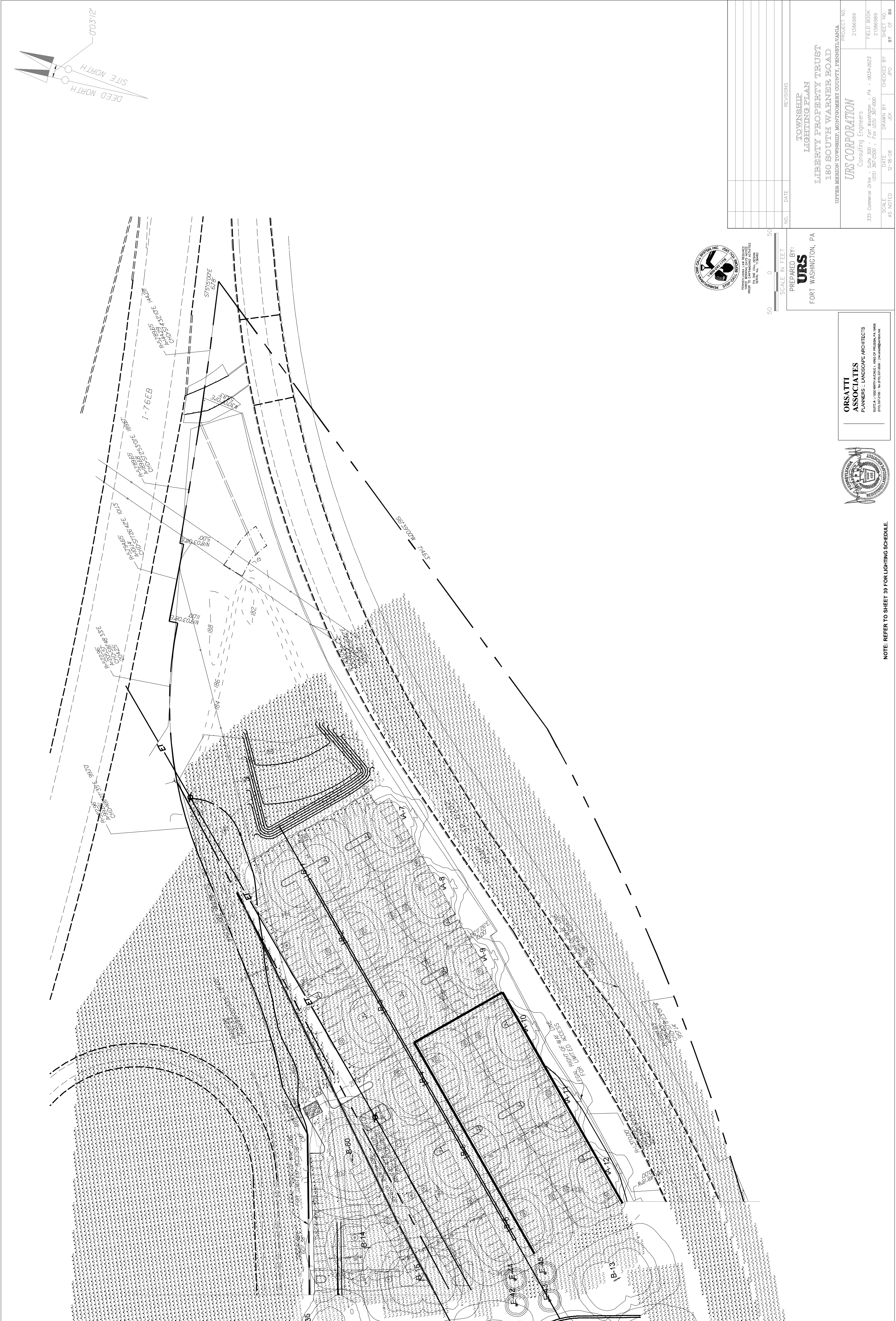


**ORSATTI
ASSOCIATES**
PLANNERS ■ LANDSCAPE ARCHITECTS

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(610) 337-2100 Fax (610) 337-3639 jhw.creati@verizon.net

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SCALE IN FEET
PREPARED BY:
URS
FORT WASHINGTON, PA

[illegible]



PLANS SHALL BE REVIEWED
PRIOR TO CONSTRUCTION ACTIVITIES
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SCALE: 1"=50'

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SCALE IN FEET

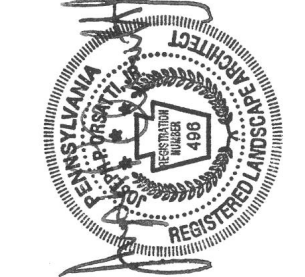
PREPARED BY:
URS
FORT WASHINGTON, PA

REVISIONS
NO. DATE

TOWNSHIP
LIBERTY PLAN
LIBERTY PROPERTY TRUST
180 SOUTH WARNER ROAD
UPPER MERION TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

PROJECT NO.	2136689
FIELD BOOK	2136689
CHECKED BY	JPO
DRAWN BY	JEK
DATE	12-18-08
SCALE	AS NOTED

ORSATTI ASSOCIATES
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SUITE A 1100 NORTH AVENUE E. KING OF PRUSSIA, PA 19150
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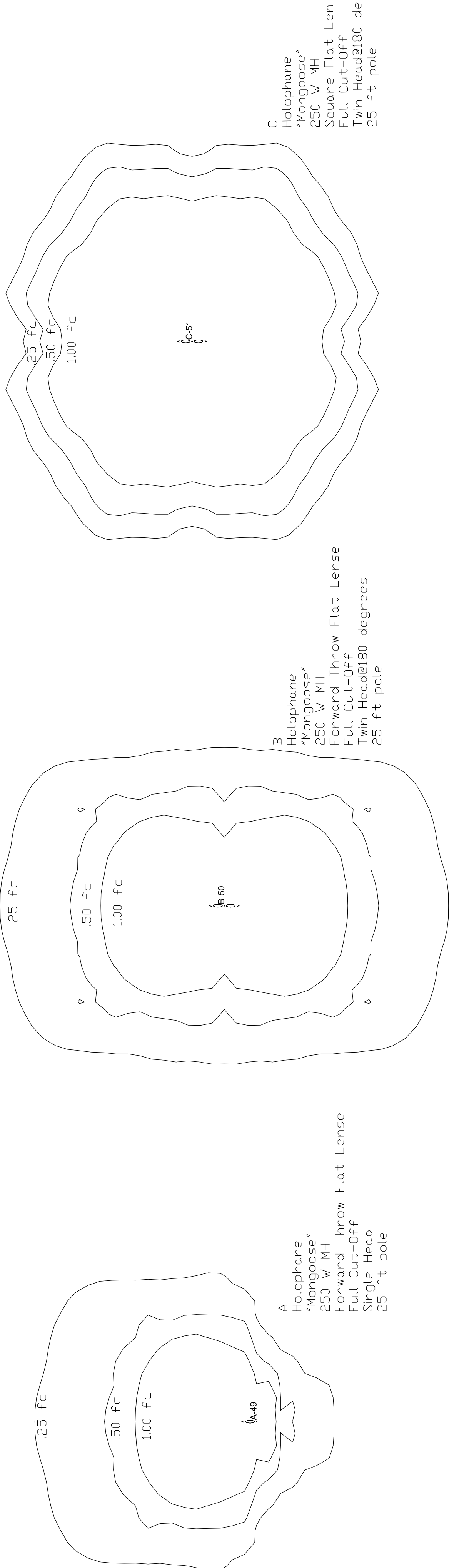


NOTE: REFER TO SHEET 39 FOR LIGHTING SCHEDULE.

LUMINAIRE SCHEDULE							
Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens
ⓘ	A	7	G250MH04LFFXXX SINGLE	MONGOOSE 26 FT POLE HEIGHT	250W CLEAR MH	51452 IES	21000
ⓘ	B	28	G250MH04LFFXXX 25 Poles	MONGOOSE 26 FT POLE HEIGHT	250W CLEAR MH	51452 IES	21000
ⓘ	C	5	G250MH04LFFXXX 25 Poles	MONGOOSE 26 FT POLE HEIGHT	250W CLEAR MH	51046 IES	21000
ⓘ	D	13	G175MH04LFF 25 HOUSE SODE SHIELD	MONGOOSE 26 FT POLE PROTRUD FROM 175W CLEAR MH	250 CLEAR MH	102224 IES	21000
ⓘ	E	11	H101H102-100M-SYMMETRICAL 100 FT HIGH	H101 LOUVER BOLLARD, SYMMETRICAL 100 FT HIGH COATED 100W MH ED-17	100 W CLEAR MH	H101AM102-100M SYMMET	7800

LUMINAIRE LOCATIONS									
No.	Label	X	Y	Z	MH	Orientation	Tilt	X	Y
1	B	6822.7	462.8	25.0	25.0	-22.3	0.0		
2	B	6730.2	426.8	25.0	25.0	-19.7	0.0		
3	B	6634.8	386.1	25.0	25.0	-20.1	0.0		
4	B	6535.8	346.1	25.0	25.0	-20.3	0.0		
5	B	6435.4	306.5	25.0	25.0	-21.1	0.0		
6	B	6335.2	267.5	25.0	25.0	-21.2	0.0		
7	A	6878.3	326.3	25.0	25.0	-18.7	0.0	6878.6	326.5
8	A	6782.1	288.3	25.0	25.0	-18.7	0.0	6781.4	290.4
9	A	6684.0	249.0	25.0	25.0	-18.7	0.0	6683.3	251.2
10	A	6586.0	209.2	25.0	25.0	-18.7	0.0	6585.3	211.3
11	A	6488.0	168.3	25.0	25.0	-18.7	0.0	6487.3	170.4
12	A	6389.7	129.2	25.0	25.0	-18.7	0.0	6388.9	131.3
13	B	6253.1	140.2	25.0	25.0	-21.1	0.0		
14	B	6338.1	452.9	25.0	25.0	5.6	0.0		
15	B	6286.8	389.0	25.0	25.0	5.8	0.0		
16	B	6015.8	325.7	25.0	25.0	-34.1	0.0		
17	B	6001.1	216.3	25.0	25.0	-32.4	0.0		
18	B	5985.0	113.6	25.0	25.0	-34.9	0.0		
19	B	6169.7	310.4	25.0	25.0	-34.0	0.0		
20	B	6142.4	208.3	25.0	25.0	-34.4	0.0		
21	B	6136.1	103.3	25.0	25.0	-33.2	0.0		
22	B	5727.0	339.7	25.0	25.0	6.2	0.0		
23	B	5872.5	104.9	25.0	25.0	7.5	0.0		
24	B	5764.4	117.4	25.0	25.0	8.5	0.0		
25	C	5708.7	213.2	25.0	25.0	60.5	0.0		
26	C	5598.7	346.6	25.0	25.0	60.5	0.0		
27	B	5640.8	115.7	25.0	25.0	-19.8	0.0		
28	B	5441.0	57.4	25.0	25.0	-18.6	0.0		
29	B	5442.4	83.2	25.0	25.0	-18.9	0.0		
30	D	5514.3	387.1	25.0	25.0	40.4	0.0	5515.7	388.8
31	D	5447.6	449.0	25.0	25.0	49.2	0.0	5449.3	450.5
32	D	5399.3	519.9	25.0	25.0	49.2	0.0	5401.0	521.4
33	D	5608.8	236.1	25.0	25.0	54.0	0.0	5610.6	237.4
34	D	5820.4	576.8	25.0	25.0	188.2	0.0	5820.0	574.6
35	D	6243.3	537.7	25.0	25.0	188.2	0.0	6243.0	535.5
36	D	6131.9	552.4	25.0	25.0	188.2	0.0	6131.6	550.2
37	D	6022.5	565.2	25.0	25.0	188.2	0.0	6022.2	562.9
38	E	5779.0	249.7	4.0	4.0	-39.3	0.0	5779.0	249.7
39	E	5670.6	392.4	4.0	4.0	187.6	0.0	5670.6	392.4
40	E	5644.8	395.8	4.0	4.0	191.1	0.0	5644.8	395.8
41	E	5923.0	270.9	4.0	4.0	96.0	0.0	5923.0	270.9
42	E	6238.4	272.7	4.0	4.0	103.3	0.0	6238.4	272.7
43	E	6238.1	229.8	4.0	4.0	101.6	0.0	6238.1	229.8
44	E	6271.1	270.0	4.0	4.0	259.6	0.0	6271.1	270.0
45	E	6273.7	230.6	4.0	4.0	267.5	0.0	6273.7	230.6
46	E	6085.0	374.5	4.0	4.0	189.2	0.0	6085.0	374.5
47	E	6141.6	367.7	4.0	4.0	187.1	0.0	6141.6	367.7
48	C	5346.9	41.6	25.0	25.0	-22.9	0.0		
54	C	5900.0	639.8	25.0	25.0	99.6	0.0		
55	B	5626.5	573.7	25.0	25.0	97.4	0.0		
56	B	5662.6	592.4	25.0	25.0	96.8	0.0		
57	B	5630.9	675.9	25.0	25.0	98.9	0.0		
58	D	5392.2	621.9	25.0	25.0	117.1	0.0	5394.2	620.9
59	B	5757.7	728.5	25.0	25.0	88.9	0.0		
60	B	6445.2	465.3	25.0	25.0	97.8	0.0		
61	D	5168.1	-33.8	25.0	25.0	-16.8	0.0	5167.5	-31.7
62	D	5250.7	-19.6	25.0	25.0	-7.6	0.0	5250.4	-17.4
63	B	5550.3	573.2	25.0	25.0	96.8	0.0		
64	D	5486.6	682.1	25.0	25.0	157.1	0.0	5489.4	680.1

STATISTICS							
Description	Symbol	Avg	Max	Min	MaxMin	AvgMin	
Adjacent Property@5 ft above grade	+	0.0 fc	0.3 fc	0.0 fc	N/A	N/A	
Adjacent Road@5 ft above grade	+	0.0 fc	0.3 fc	0.0 fc	N/A	N/A	
Entrance	+	0.0 fc	2.4 fc	0.3 fc	8.0 ft	3.0 ft	
Parking	+	1.0 fc	4.6 fc	0.1 fc	46.0 ft	10.0 ft	
Opposite Right of Way@5 ft above grade	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A	
Parking Center Lot New	+	1.3 fc	5.0 fc	0.3 fc	16.7 ft	4.3 ft	
Parking Exit Lot	+	1.2 fc	5.3 fc	0.3 fc	17.7 ft	4.0 ft	
Parking Main Front Access Road	+	1.4 fc	5.1 fc	0.3 fc	17.0 ft	4.7 ft	
Parking Rear Loading & Access Road	+	1.4 fc	5.0 fc	0.3 fc	16.7 ft	4.7 ft	
Parking Rear New Lot	+	1.5 fc	5.2 fc	0.3 fc	17.3 ft	5.0 ft	
Parking West Lot	+	1.5 fc	4.8 fc	0.3 fc	16.0 ft	5.0 ft	



NOTES

- All luminaires are UL Listed & CSA certified
- Suitable for Wet Location Use
- 80 mph pole wind loading
- IESNA Classification "Full-Cut-Off"



PREPARED BY:
URS
FORT WASHINGTON, PA

NO. DATE

REVISIONS

TOWNSHIP
LIBERTY
LIBERTY PROPERTY TRUST
180 SOUTH WARNER ROAD
UPPER MERION TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

PROJECT NO. 2138689	
Consulting Engineers 335 Commerce Drive • Suite 300 • Fort Washington • PA • 8034-2623 (215) 367-2500 • Fax (215) 367-0000	
FIELD BOOK 2138689	
SCALE AS NOTED	CHECKED BY JPO
DATE 12-18-08	DRAWN BY JEK
SHEET NO. 88	OF 88

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