

PRELIMINARY AND FINAL SITE PLAN APPLICATION

PREPARED FOR

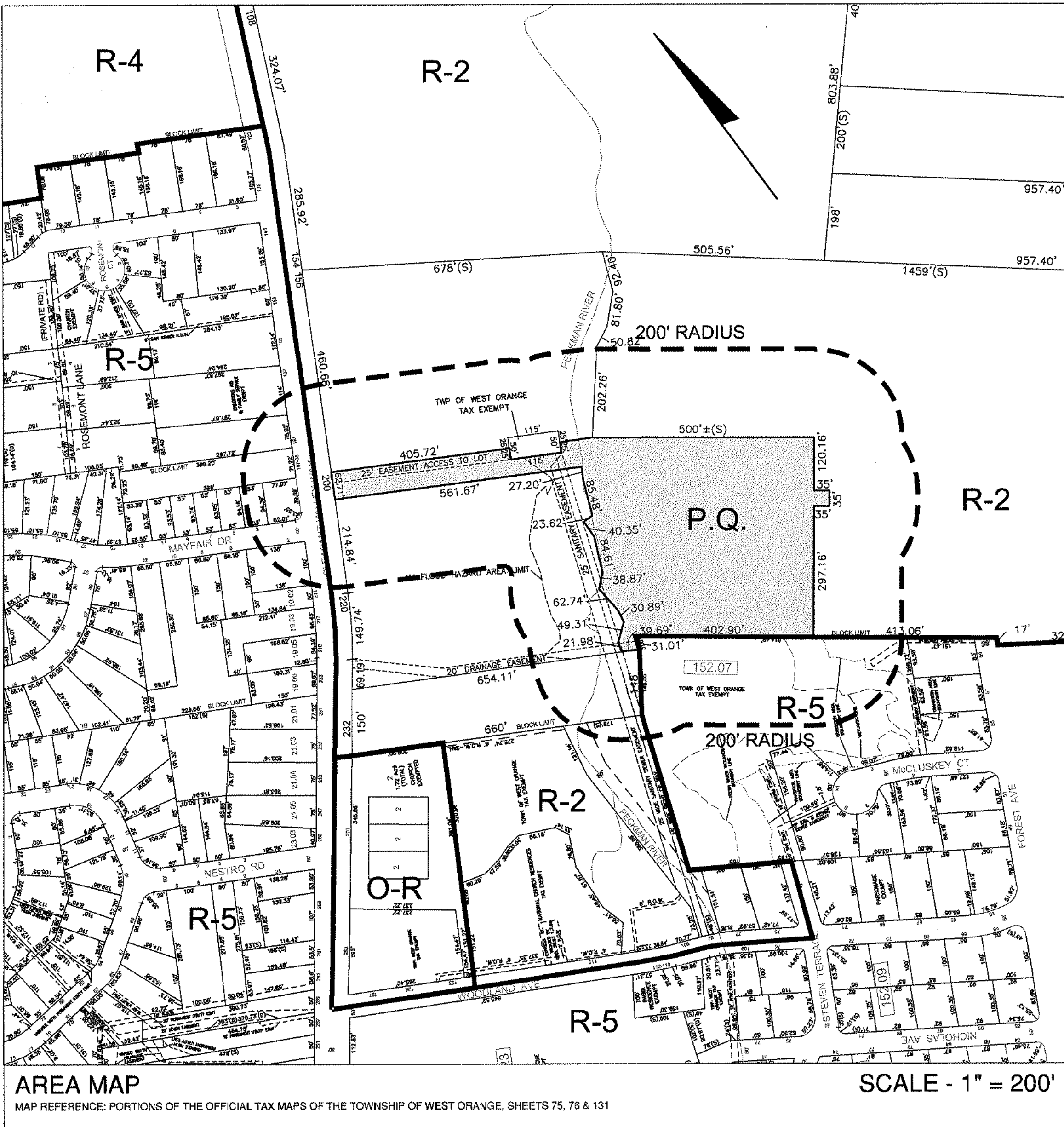
THE REDWOOD

TO BE LOCATED IN
LOT 33 BLOCK 151
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY, NEW JERSEY



AERIAL MAP
AERIAL IMAGE OBTAINED FROM NGIN WAREHOUSE, 2015

SCALE - 1" = 200'



AREA MAP
MAP REFERENCE: PORTIONS OF THE OFFICIAL TAX MAPS OF THE TOWNSHIP OF WEST ORANGE, SHEETS 75, 76 & 131

SCALE - 1" = 200'

LIST OF DRAWINGS		
SHEET No.	DRAWING NAME	PREPARED BY
SP-1	TITLE SHEET	PETRY ENGINEERING LLC
SP-2	SITE LAYOUT PLAN	PETRY ENGINEERING LLC
SP-3	GRADING AND DRAINAGE PLAN	PETRY ENGINEERING LLC
SP-4	UTILITY PLAN	PETRY ENGINEERING LLC
SP-5	DRIVEWAY & STORM SEWER PROFILES	PETRY ENGINEERING LLC
SP-6	DRIVEWAY & STORM SEWER PROFILES	PETRY ENGINEERING LLC
SP-7	DRIVEWAY & STORM SEWER PROFILES	PETRY ENGINEERING LLC
SP-8	DRIVEWAY & STORM SEWER PROFILES	PETRY ENGINEERING LLC
SP-9	LIGHTING PLAN	PETRY ENGINEERING LLC
SP-10	LANDSCAPE/TREE REMOVAL PLAN	PETRY ENGINEERING LLC
SP-11	SOIL EROSION & SEDIMENT CONTROL	PETRY ENGINEERING LLC
SP-12	SOIL EROSION & SEDIMENT CONTROL FOR BRIDGE RECONSTRUCTION	PETRY ENGINEERING LLC
SP-13	CONSTRUCTION DETAILS	PETRY ENGINEERING LLC
SP-14	CONSTRUCTION DETAILS	PETRY ENGINEERING LLC
SP-15	CONSTRUCTION DETAILS	PETRY ENGINEERING LLC
SP-16	CONSTRUCTION DETAILS	PETRY ENGINEERING LLC
1 of 1	BOUNDARY AND TOPOGRAPHIC SURVEY	CONTROL LAYOUTS, INC.
NF-1	NATURAL FEATURES MAP	PETRY ENGINEERING LLC
A-101	GRADE LEVEL PLAN - GARAGE	MICHEL & WALDRON
A-102	GROUND FLOOR & AMENITIES PLAN	MICHEL & WALDRON
A-103	TYPICAL FLOOR PLAN	MICHEL & WALDRON
A-104	TYPICAL UNITS PLAN	MICHEL & WALDRON
A-105	BUILDING SECTIONS	MICHEL & WALDRON
A-106	ELEVATIONS	MICHEL & WALDRON
A-107	ELEVATIONS	MICHEL & WALDRON
A-108	ELEVATIONS	MICHEL & WALDRON
A-109	ELEVATIONS	MICHEL & WALDRON
A-110	VIEW	MICHEL & WALDRON

LIST OF APPROVALS:

- ESSEX COUNTY
- TREATMENT WORKS APPROVAL
- WATER MAIN EXTENSION
- HSP SOIL CONSERVATION DISTRICT

GENERAL NOTES:

- SUBJECT PROPERTY IS SERVICED BY THE TOWNSHIP OF WEST ORANGE MUNICIPAL PUBLIC WATER AND SANITARY SEWER SYSTEM.
- ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE STATE, COUNTY AND MUNICIPAL REQUIREMENTS.
- CONTRACTOR IS ADVISED THAT ALL APPLICABLE CONSA SAFETY REGULATIONS MUST BE FOLLOWED DURING THE COURSE OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO: PAVING, SHEETING AND OR DRIVING OF ANY TYPE OF CONSTRUCTION. THE DRAWINGS ARE NOT INTENDED TO ILLUSTRATE METHODS OF CONSTRUCTION OF THE RETAINING WALLS OR ELEVATION DETAILS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EVALUATE ACTUAL SITE CONDITIONS AND COMPLY WITH ALL NECESSARY SAFETY REGULATIONS.
- THE APPLICANT MUST COMPLY WITH THE REQUIREMENTS OF THE AFFORDABLE HOUSING DEVELOPMENT FEE ORDINANCE.
- THE APPLICANT IS RESPONSIBLE FOR ALL SEWER AND WATER TIE-IN FEES.

APPROVALS
TOWNSHIP OF WEST ORANGE

PLANNING BOARD CHAIRPERSON

PLANNING BOARD SECRETARY

TOWNSHIP ENGINEER

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN A RAISED IMPRESSION SEAL OF THE UNDERSIGNED PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT.

SITE DATA CHART			
LOT 33 BLOCK 151 ZONE: REDEVELOPMENT ZONE AREA: 5.913 ACRES/257,557 SF APPLICANT: REDWOOD, L.L.C. c/o PAGANO REAL ESTATE & OWNER: 420 BOULEVARD, SUITE 201 MOUNTAIN LAKE, NEW JERSEY 07046 PROPOSED USE: CONSTRUCT FIVE AND A HALF-STORY LUXURY RESIDENTIAL COMMUNITY W/ 142 UNITS PER SETTLEMENT AGREEMENT			
BUILDING/LOT REQUIREMENTS			
DESCRIPTION	CODE	PROPOSED	COMPLIANCE
MAX. UNITS	142	142 UNITS	YES
MAX. BLDG. HEIGHT	5.5 STY/65'	5.5 STY/65'	YES
MIN. LOT AREA (SF)	5.0 ACRES	5.913 ACRES	YES
MIN. LOT WIDTH	60' @ SETBACK 300' @ BUILDING	62.7' @ SETBACK 456.9' @ BUILDING	YES YES
MAX. BUILDING COVERAGE	35%	31.8%	YES
MAX. IMPERVIOUS COVERAGE	75%	68.1%	YES
MIN. FRONT YARD	150'	692.4'	YES
MIN. SIDE YARD (EACH)	50'	92.1' + 66.0'	YES
MIN. REAR YARD	60'	68.3'	YES
FREE STANDING SIGNS	1 @ ENTRY 1 @ PARKING LOT	1 @ ENTRY 1 @ PARKING LOT	YES
SIGN AREA	ONE-75 SF SIGN (V) WAY 7.11' SF @ ENTRANCE (BOTH SIDES) ONE-55 SF SIGN INTERIOR 53.2 SF @ PARKING LOT		YES
STEEP SLOPES CALCULATIONS (PER SECT. 25-28.8 (d))			
DESCRIPTION	CODE	PROPOSED	COMPLIANCE
MIN. EFFECTIVE LOT AREA	5.0 ACRES	5.919 ACRES	YES
MAX. EFFECTIVE BUILDING COVERAGE	35%	34.0%	YES
MAX. EFFECTIVE IMPERVIOUS COVERAGE	75%	72.8%	YES
TREE REMOVAL ON SLOPES ≥ 15%	FOR PEDESTRIAN ACCESS ONLY	YES FOR SIDEWALK	YES
PARKING REQUIREMENTS			
DESCRIPTION	CODE	PROPOSED	COMPLIANCE
MIN. NUMBER OF TREES WITHIN PARKING AREA	25-12.1 (g)	1 TREE/10 SPACES (18.8)	35 TREES YES
PARKING STALL SIZE	25-12.1 (a)	9' x 18'	9' x 18' YES
MIN. REQUIRED PARKING	25-12.2 (a)(1)	2 SPACES/ UNIT (PER RSIS) 284	170 INSIDE BLDG. 168 SURFACE 28 EV CREDIT 366 TOTAL YES
MIN. TWO WAY PARKING AISLE WIDTH	25-12.1 (h)(5)	24'	24' YES
MAX. PARKING AREA WITHIN MIN. REQ'D. SETBACK AREA	25-12.4 (b)(2)	30%	23.2% YES
PARKING SPACES REQUIRED			
MID-RISE BUILDING			
SPACES PER 1 UNIT 2.0 @ 142 UNITS = 284 SPACES			
TOTAL REQUIRED PARKING = 284 SPACES			
TOTAL PROVIDED PARKING = 336 SPACES			
ELECTRIC VEHICLE PARKING CALCULATIONS (PER N.J.A.C. 40:55D-68.20)			
284 SPACES REQUIRED x 10% = 43 ELECTRIC SPACES REQUIRED (OF WHICH 5% ARE H.C. SPACES OR 3 H.C. SPACES)			
44 EV SPACES PROPOSED			
EV CREDIT = REQUIRED PARKING x 10% = 284 SPACES x 10% = 28 SPACES			
PARKING CALCULATIONS (ADA)			
INSIDE BUILDING:			
170 SPACES = 6 SPACES (1 VAN)			
OUTSIDE BUILDING:			
168 SPACES = 6 SPACES (1 VAN)			
TOTAL: 12 SPACES (2 VAN)			
BUILDING COVERAGE			
BUILDING COVERAGE = (BUILDING FOOTPRINT / LOT AREA) x 100			
BUILDING COVERAGE = (81,775 SF / 257,557 SF) x 100			
BUILDING COVERAGE = 31.8%			
EFFECTIVE BUILDING COVERAGE			
EFFECTIVE BUILDING COVERAGE = (BUILDING FOOTPRINT / EFFECTIVE LOT AREA) x 100			
BUILDING COVERAGE = (81,775 SF / 240,408.84 SF) x 100			
BUILDING COVERAGE = 34.0%			
IMPERVIOUS COVERAGE			
BUILDING COVERAGE = (IMPERVIOUS AREA / LOT AREA) x 100			
BUILDING COVERAGE = (175,395 SF / 257,557 SF) x 100			
BUILDING COVERAGE = 68.1%			
EFFECTIVE IMPERVIOUS COVERAGE			
BUILDING COVERAGE = (IMPERVIOUS AREA / LOT AREA) x 100			
BUILDING COVERAGE = (175,395 SF / 240,408.84 SF) x 100			
BUILDING COVERAGE = 72.8%			
BUILDING HEIGHT			
BUILDING HEIGHT = FT + BUILDING HEIGHT - AVERAGE GRADE			
BUILDING HEIGHT = 364.5' + 56.1' - 375.6'			
BUILDING HEIGHT = 65.0'			

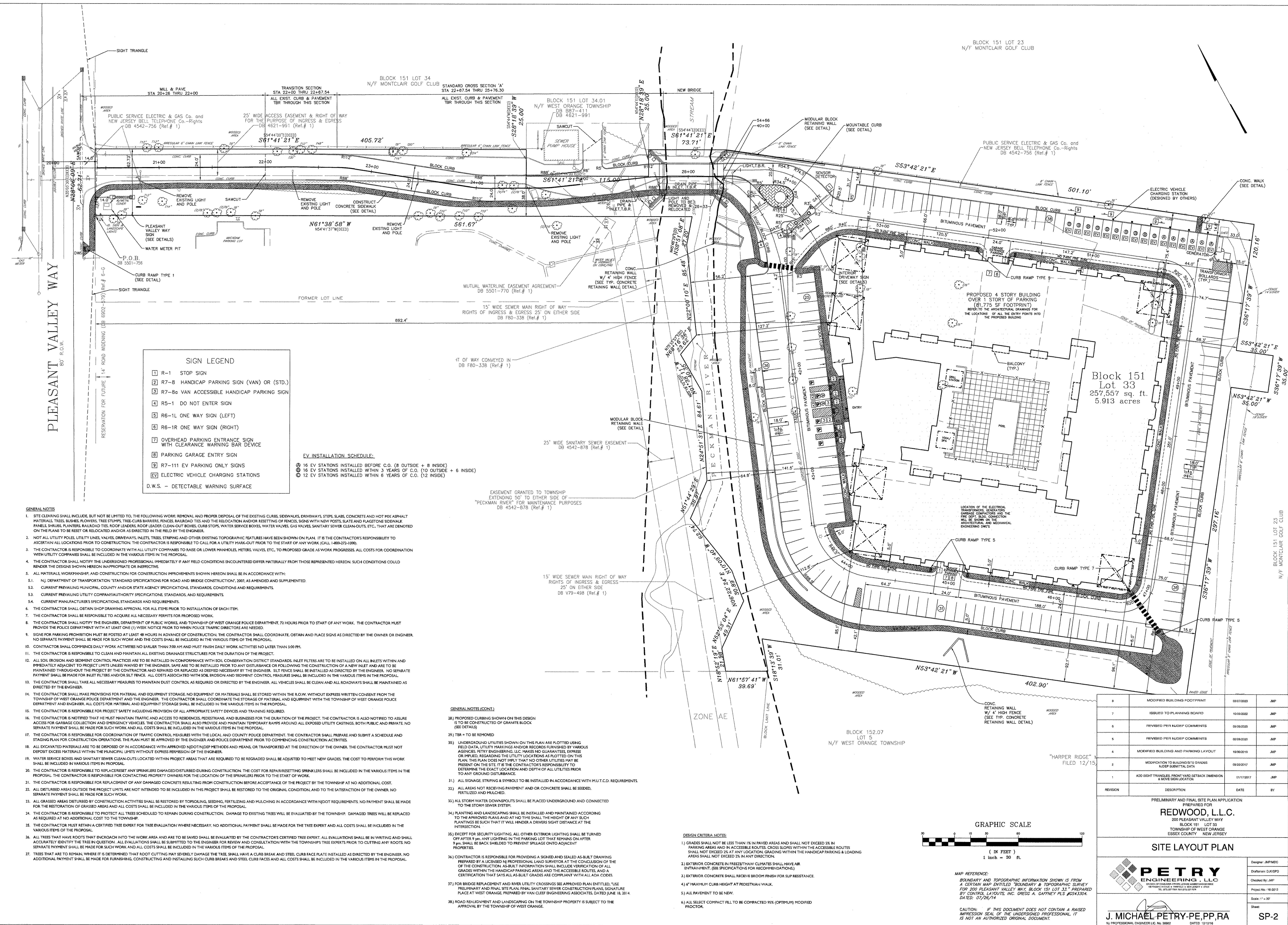
8	MODIFIED BUILDING FOOTPRINT	03/07/2023	JMP
7	ISSUED TO PLANNING BOARD	10/05/2022	JMP
6	REVISED PER NADCP COMMENTS	05/18/2020	JMP
5	REVISED PER NADCP COMMENTS	02/26/2020	JMP
4	MODIFIED BUILDING AND PARKING LAYOUT	10/30/2019	JMP
3	MODIFICATION TO BUILDING/SITE GRADERS NADCP SUBMITTAL DATA	09/09/2017	JMP
2	UPDATED FOR COMPLETENESS PER BOARD PROFESSIONALS	04/18/2017	JMP
1	PARKING GARAGE SPACE COUNT	01/17/2017	JMP
REVISION	DESCRIPTION	DATE	BY

PRELIMINARY AND FINAL SITE PLAN APPLICATION
PREPARED FOR
REDWOOD, L.L.C.
200 PLEASANT VALLEY WAY
BLOCK 151 LOT 33
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY NEW JERSEY

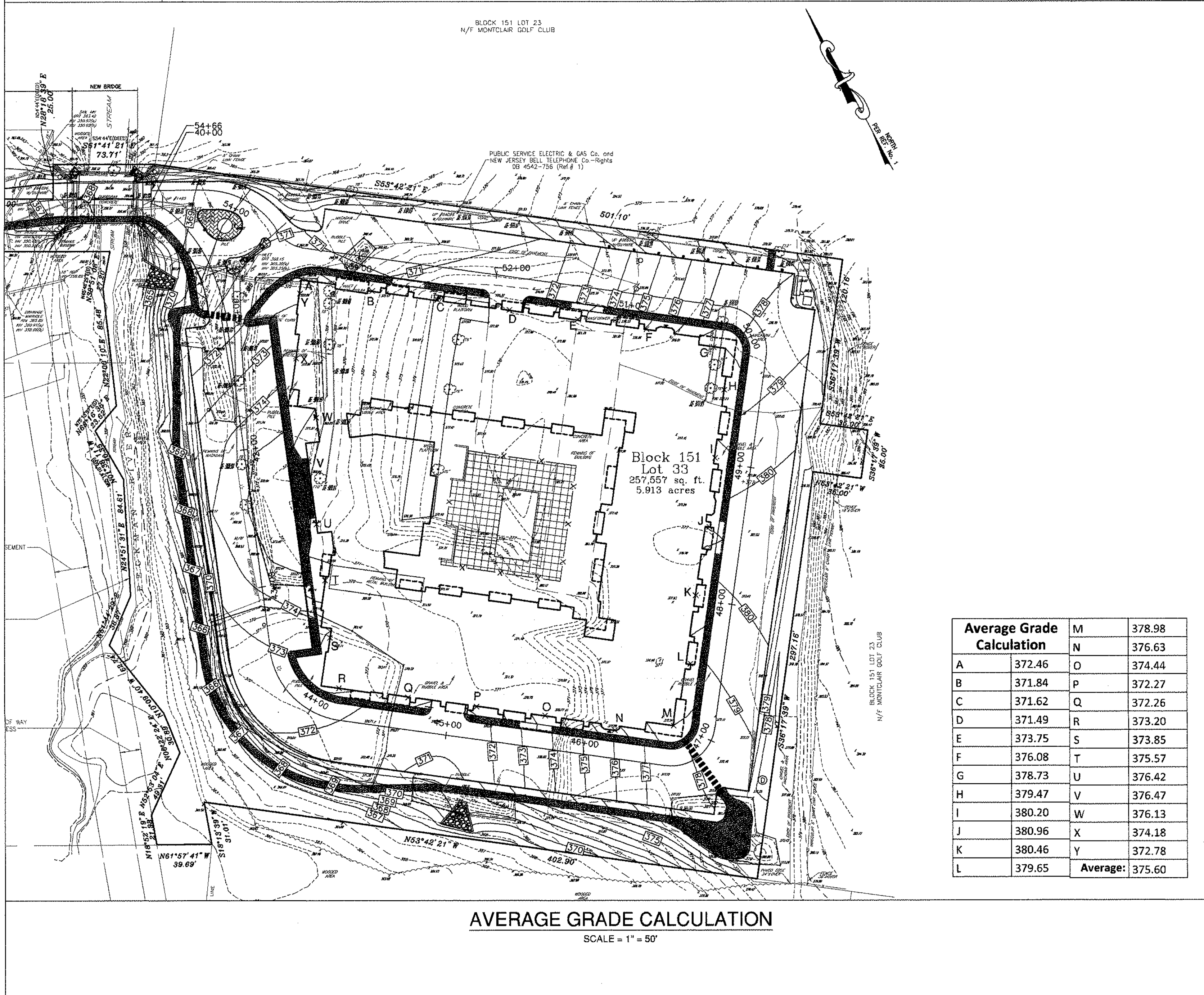
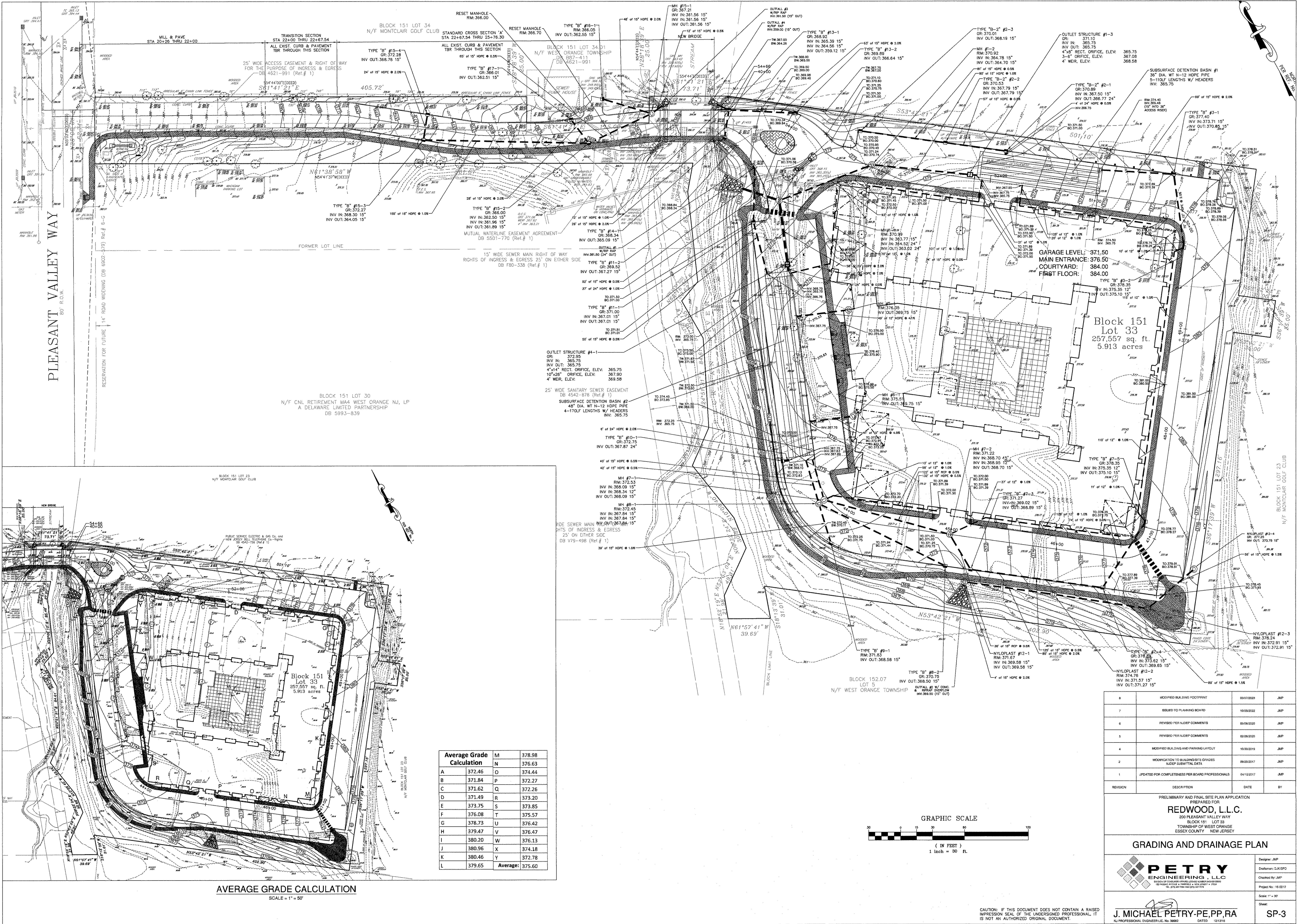
TITLE SHEET

PETRY ENGINEERING, LLC
DIVISION OF CONSULTING ARCHITECTS, ENGINEERS AND SURVEYORS
100 MARKET STREET, SUITE 200, NEW JERSEY 07102
TEL: 973.527.7600 FAX: 973.527.7601

Design: JMP
Draftman: DJV/GPD
Checked By: JMP
Project No: 16-0012
Scale: AS NOTED
Sheet:
J. MICHAEL PETRY, PE, PP, RA
NJ PROFESSIONAL ENGINEER LIC. NO. 38865
DATED: 12/13/16
SP-1

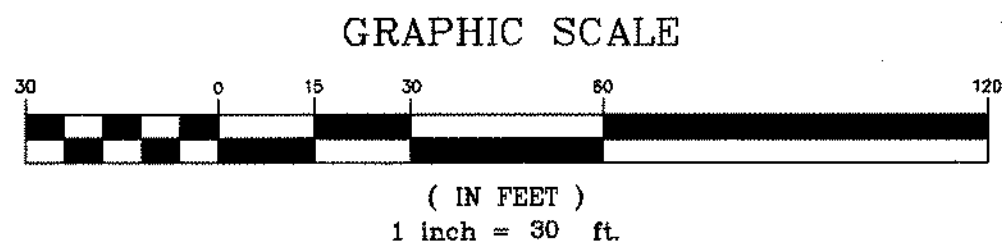


6	MODIFIED BUILDING FOOTPRINT	09/07/2023	JMP
7	ISSUED TO PLANNING BOARD	10/09/2022	JMP
8	REVISED PER NJDEP COMMENTS	05/06/2020	JMP
9	REVISED PER NJDEP COMMENTS	02/08/2020	JMP
4	MODIFIED BUILDING AND PARKING LAYOUT	10/26/2019	JMP
2	MODIFICATION TO BUILDING SITE GRADES NJDEP SUBMITTAL DATA	09/29/2017	JMP
1	ADD EIGHT TRIANGLES FRONT YARD SETBACK DIMENSION & MOVE SIGN LOCATION	01/17/2017	JMP
REVISION	DESCRIPTION	DATE	BY
PRELIMINARY AND FINAL SITE PLAN APPLICATION PREPARED FOR REDWOOD, L.L.C. 200 PLEASANT VALLEY WAY BLOCK 151 LOT 33 TOWNSHIP OF WEST ORANGE ESSEX COUNTY NEW JERSEY			
SITE LAYOUT PLAN			
J. MICHAEL PETRY-PE,PP,RA NJ PROFESSIONAL ENGINEER, LIC. NO. 36869			
DATE: 12/12/16			
Sheet: SP-2			

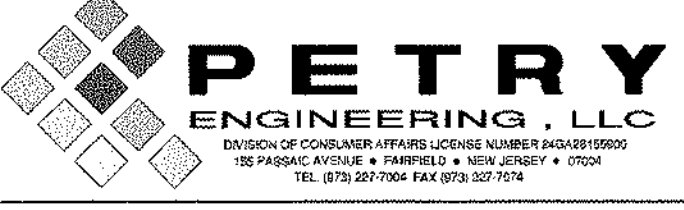


Average Grade Calculation		M		378.98
A	372.46	O		376.63
B	371.84	P		372.27
C	371.62	Q		372.26
D	371.49	R		373.20
E	373.75	S		373.85
F	376.08	T		375.57
G	378.73	U		376.42
H	379.47	V		376.47
I	380.20	W		376.13
J	380.96	X		374.18
K	380.46	Y		372.78
L	379.65	Average:		375.60

AVERAGE GRADE CALCULATION
SCALE = 1" = 50'

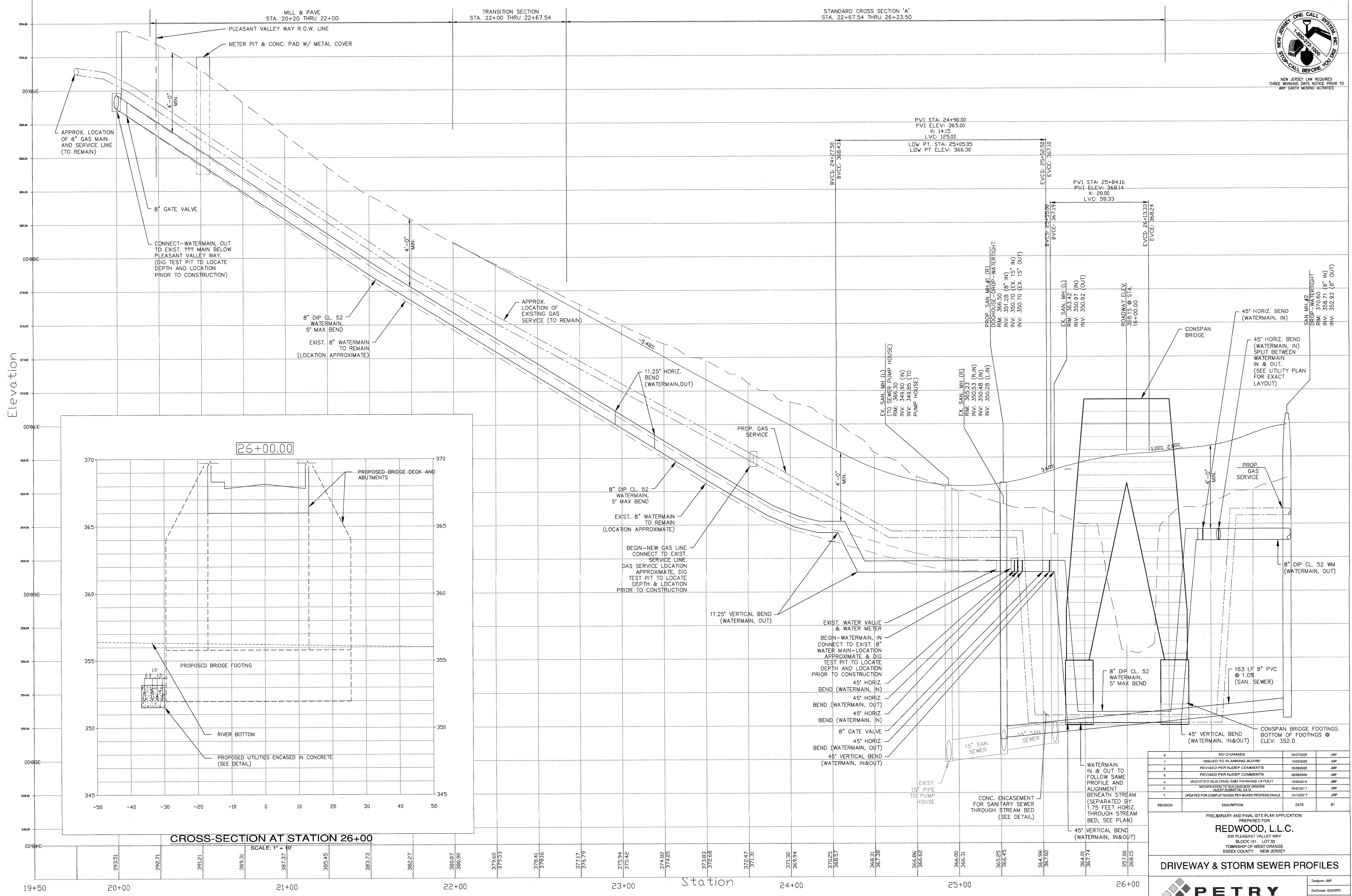


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8	MODIFIED BUILDING FOOTPRINT	08/01/2023	JMP
7	ISSUED TO PLANNING BOARD	10/09/2022	JMP
6	REVISED PER NJDEP COMMENTS	05/06/2020	JMP
5	REVISED PER NJDEP COMMENTS	02/29/2020	JMP
4	MODIFIED BUILDING AND PARKING LAYOUT	10/09/2018	JMP
2	MODIFICATION TO BUILDING'S SHADES NJDEP SUBMITTAL DATA	08/29/2017	JMP
1	UPDATED FOR COMPLETENESS PER BOARD PROFESSIONALS	04/10/2017	JMP
REVISION	DESCRIPTION	DATE	BY
PRELIMINARY AND FINAL SITE PLAN APPLICATION PREPARED FOR REDWOOD, L.L.C. 200 PLEASANT VALLEY WAY BLOCK 151 LOT 33 TOWNSHIP OF WEST ORANGE ESSEX COUNTY NEW JERSEY			
GRADING AND DRAINAGE PLAN			
 DIVISION OF CIVIL/ENVIRONMENTAL/GEOTECHNICAL ENGINEERING 100 PLEASANT VALLEY WAY, SUITE 200 • WEST ORANGE, NJ 07063 TEL: 973.387.7800 FAX: 973.387.7801			
J. MICHAEL PETRY-PE, P.P., R.A. NJ PROFESSIONAL ENGINEER LIC. NO. 36662		Dated: 12/12/18 Sheet: SP-3	



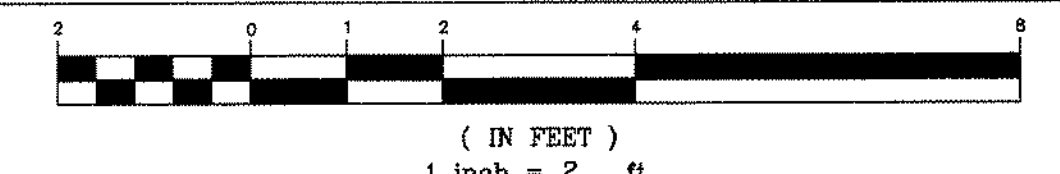
NEW JERSEY LAW REQUIRES
THREE WORKING DAYS NOTICE PRIOR TO
ANY EARTH MOVING ACTIVITIES



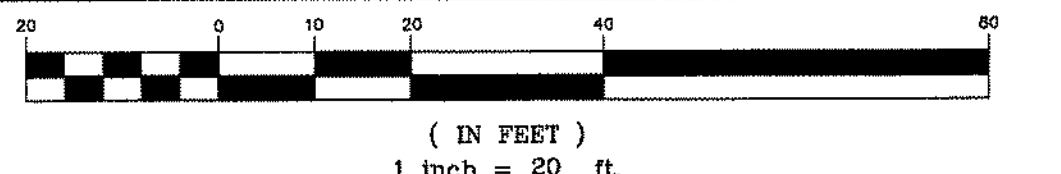
CROSS-SECTION AT STATION 26+00

SCALE: 1" = 10'

VERTICAL GRAPHIC SCALE



HORIZONTAL GRAPHIC SCALE

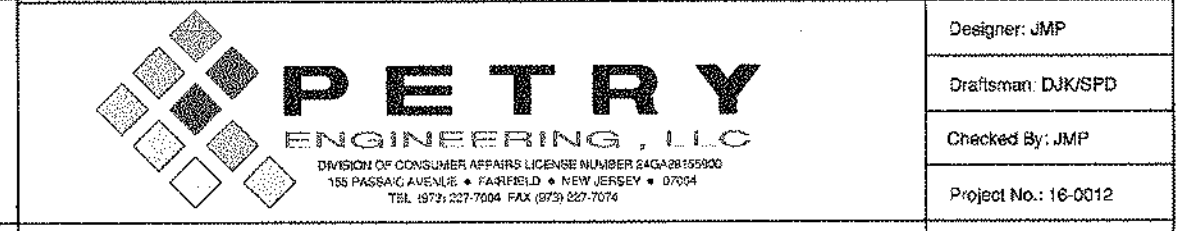


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REVISION	DESCRIPTION	DATE	BY
8	NO CHANGES	03/07/2023	JMP
7	ISSUED TO PLANNING BOARD	10/09/2022	JMP
6	REVISED PER NJDEP COMMENTS	05/09/2020	JMP
5	REVISED PER NJDEP COMMENTS	03/08/2020	JMP
4	MODIFIED BUILDING AND PARKING LAYOUT	10/05/2019	JMP
3	MODIFIED TO REFLECT SUBMITTAL DATA	08/26/2017	JMP
1	UPDATED FOR COMPLETENESS PER BOARD PROFESSIONALS	04/12/2017	JMP

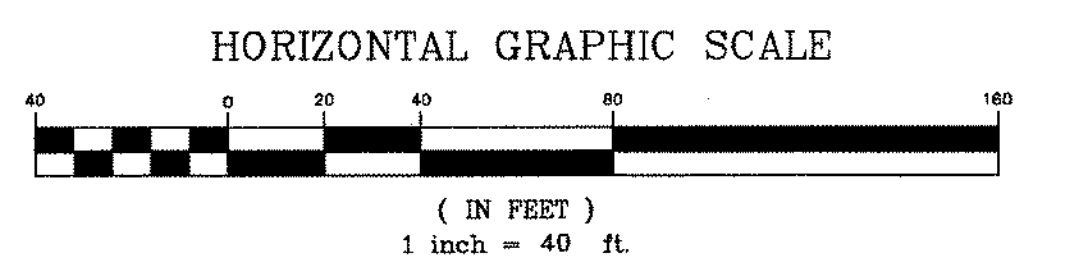
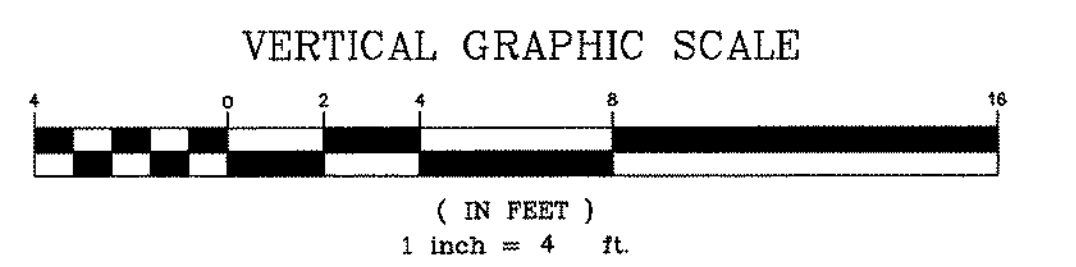
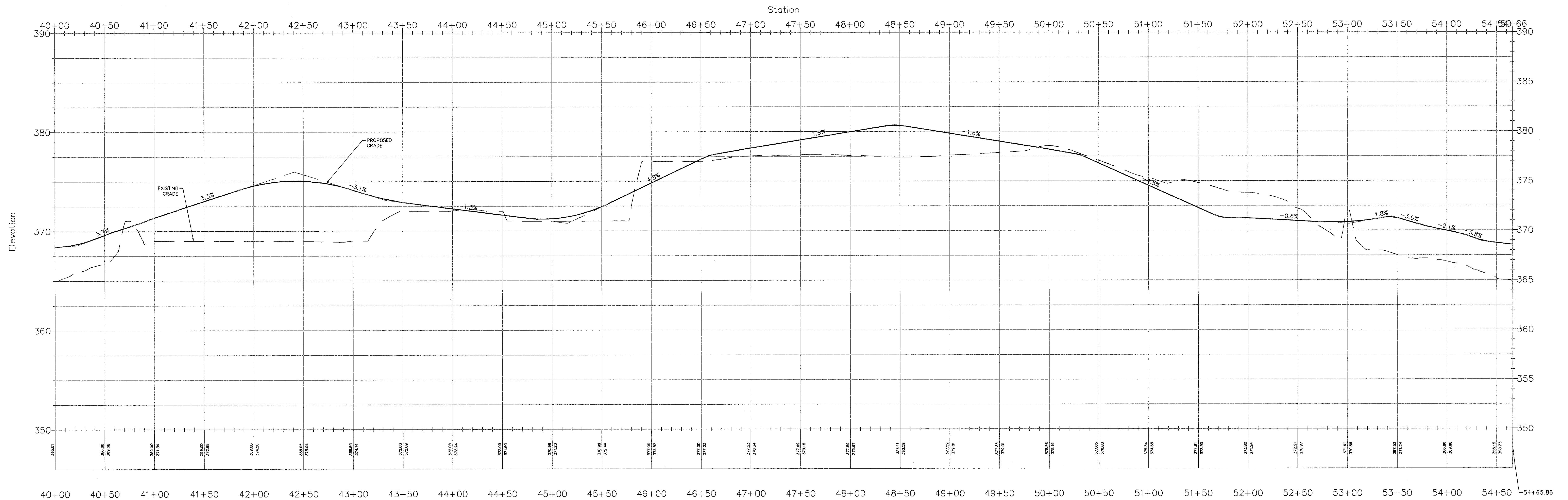
PRELIMINARY AND FINAL SITE PLAN APPLICATION
PREPARED FOR
REDWOOD, L.L.C.
200 PLEASANT VALLEY WAY
BLOCK 151 LOT 31
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY NEW JERSEY

DRIVEWAY & STORM SEWER PROFILES



Designer: JMP
Draftsman: DUB/SPD
Checked by: JMP
Project No.: 16-0012
Scale: AS NOTED
Sheet:
J. MICHAEL PETRY, PE, PP, RA
NJ PROFESSIONAL ENGINEER, License No. 3686, DATED: 06/19/17
SP-5

PARKING LOT ALIGNMENT PROFILE



8	NO CHANGE	3/30/2023	JMP
7	ISSUED TO PLANNING BOARD	1/30/2022	JMP
6	REVISED PER NJDEP COMMENTS	05/06/2021	JMP
5	REVISED PER NJDEP COMMENTS	02/28/2021	JMP
4	MODIFIED BUILDING AND PARKING LAYOUT	1/30/2019	JMP
REVISION	DESCRIPTION	DATE	BY
PRELIMINARY AND FINAL SITE PLAN APPLICATION PREPARED FOR REDWOOD, L.L.C. 205 PLEASANT VALLEY WAY BLOCK 151 LOT 33 TOWNSHIP OF WEST ORANGE ESSEX COUNTY NEW JERSEY			
DRIVEWAY & STORM SEWER PROFILES			
 PETRY ENGINEERING, LLC DESIGNER OF CONCRETE AND STEEL STRUCTURES 100 HANCOCK STREET • HANCOCK, NJ 07030 • 908.526.1100 TEL. 973.877.7000 FAX 973.877.7010			Designer: JMP Draftsman: CLK/SPD Checked By: JMP Project No.: 19-0012 Scale: AS NOTED Sheet:
 J. MICHAEL PETRY-PE, PP, RA N.J. PROFESSIONAL ENGINEER LICENSE NO. 95992			SHEET 6 OF 11 SP-6

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Station

Elevation

TYPE "B-2" #2-1
GR. 370.89
INV IN: 367.50 15"
INV OUT: 366.75 24"

TYPE "B-2" #2-2
GR. 370.53
INV IN: 367.78 15"
INV OUT: 367.78 15"

TYPE "B-2" #2-3
GR. 370.01
INV OUT: 368.19 15"

PROPOSED GRADE

EXISTING GRADE

BASIN #1
INV. 366.75

6" of 24" HOPE @ 0.5%

5" of 15" HOPE @ 0.5%

8" of 15" HOPE @ 0.5%

371.89
371.88
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-0+50 0+00 0+50 1+00 1+50 2+00

Station

Elevation

TYPE "B" #3-1
GR: 377.40
INV. IN: 373.71 15"
INV. OUT: 370.85 15"

EXISTING GRADE

PROPOSED GRADE

BASIN #1

70' of 15" HDPE @ 2.0%

60' of 15" HDPE @ 2.0%

TYPE "B" #3-2
GR: 378.35
INV. IN: 375.35 12"
INV. OUT: 375.10 15"

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MH #5-1
RIM: 372.51
INV OUT: 369.75 15'

PROPOSED GRADE

EXISTING GRADE

BASIN #2

41' of 15% HYPE @ 4.9%

INV: 367.75

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Elevation

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-0+50 0+00 0+50 1+00

Station

Elevation

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0+50 0+00 0+50 1+00 1+50 2+00 2+50 3+00 3+50 4+00 4+50

MH #7-1
RIM: 372.53
INV IN: 368.09 15"
INV IN: 368.34 15"
INV OUT: 368.09 15"

EXISTING GRADE

BASIN #2
INV: 367.89

122' of 15" RCP @ 0.5%

40' of 15" HDPE @ 0.5%

MH #7-2
RIM: 371.22
INV IN: 368.70 15"
INV IN: 368.95 12"
INV OUT: 368.70 15"

PROPOSED GRADE

38' of 15" RCP @ 0.5%

MH #7-3
RIM: 371.27
INV IN: 369.02 15"
INV OUT: 368.89 15"

125' of 15" HDPE @ 0.5%

TYPE "B" #7-4
GR: 376.89
INV IN: 373.62 15"
INV OUT: 369.65 15"

TYPE "B" #7-5
GR: 376.35
INV IN: 375.10 15"

74' of 15" HDPE @ 2.0%

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Station

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370

365

PROPOSED GRADE

EXISTING GRADE

36' x 14' HOPE @ 1.5X

MH' #6-1
RW 372.45
INV IN: 367.84 15'
INV IN: 367.84 15'
INV OUT: 367.84 15'

TYPE 'B' #9-1
GR 371.83
INV OUT: 368.58 15'

-0+50 0+00 0+50 1+00

Station

PROPOSED GRADE

EXISTING GRADE

BASIN #2
INV. 366.78

30' of 15" HOPE @ 0.58

30' of 15" HOPE @ 0.58

TYPE "B" #11-1
CR: 371.00
INV IN: 367.01 15"
INV OUT: 367.01 15"

TYPE "B" #11-2
CR: 369.52
INV OUT: 367.27 15"

24" HOPE

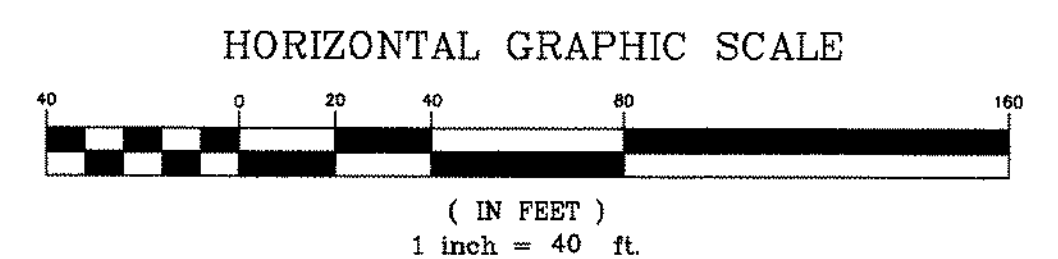
Elevation

370

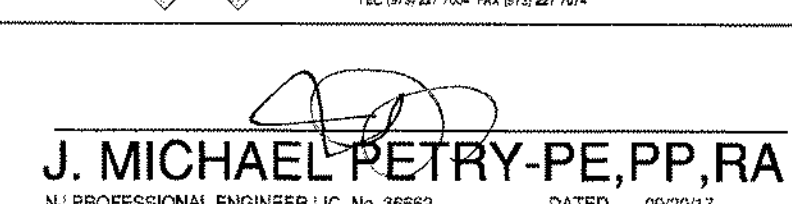
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PRELIMINARY AND FINAL SITE PLAN APPLICATION
PREPARED FOR
REDWOOD, L.L.C.
200 PLEASANT VALLEY WAY
BLOCK 151 LOT 33
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY NEW JERSEY

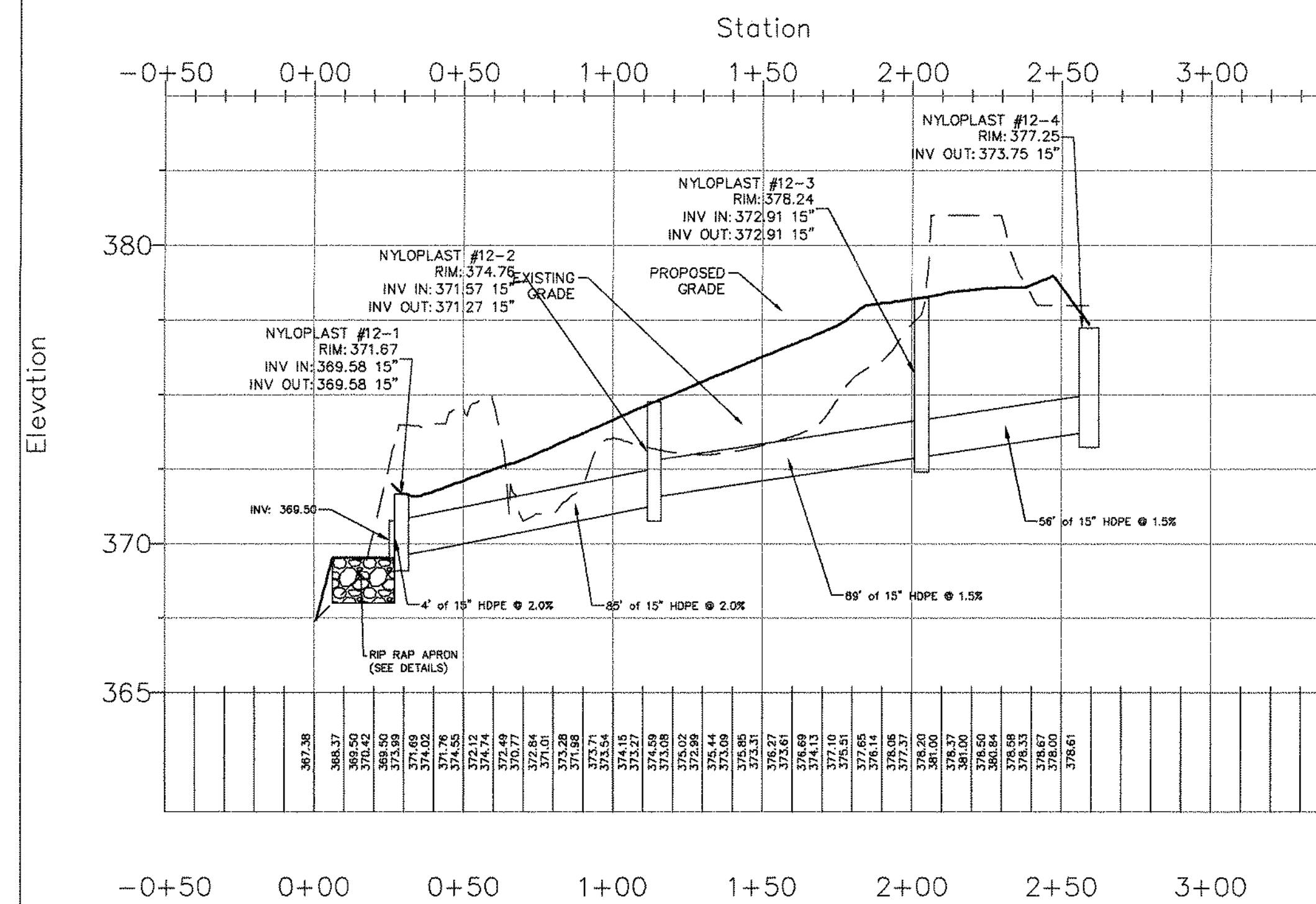


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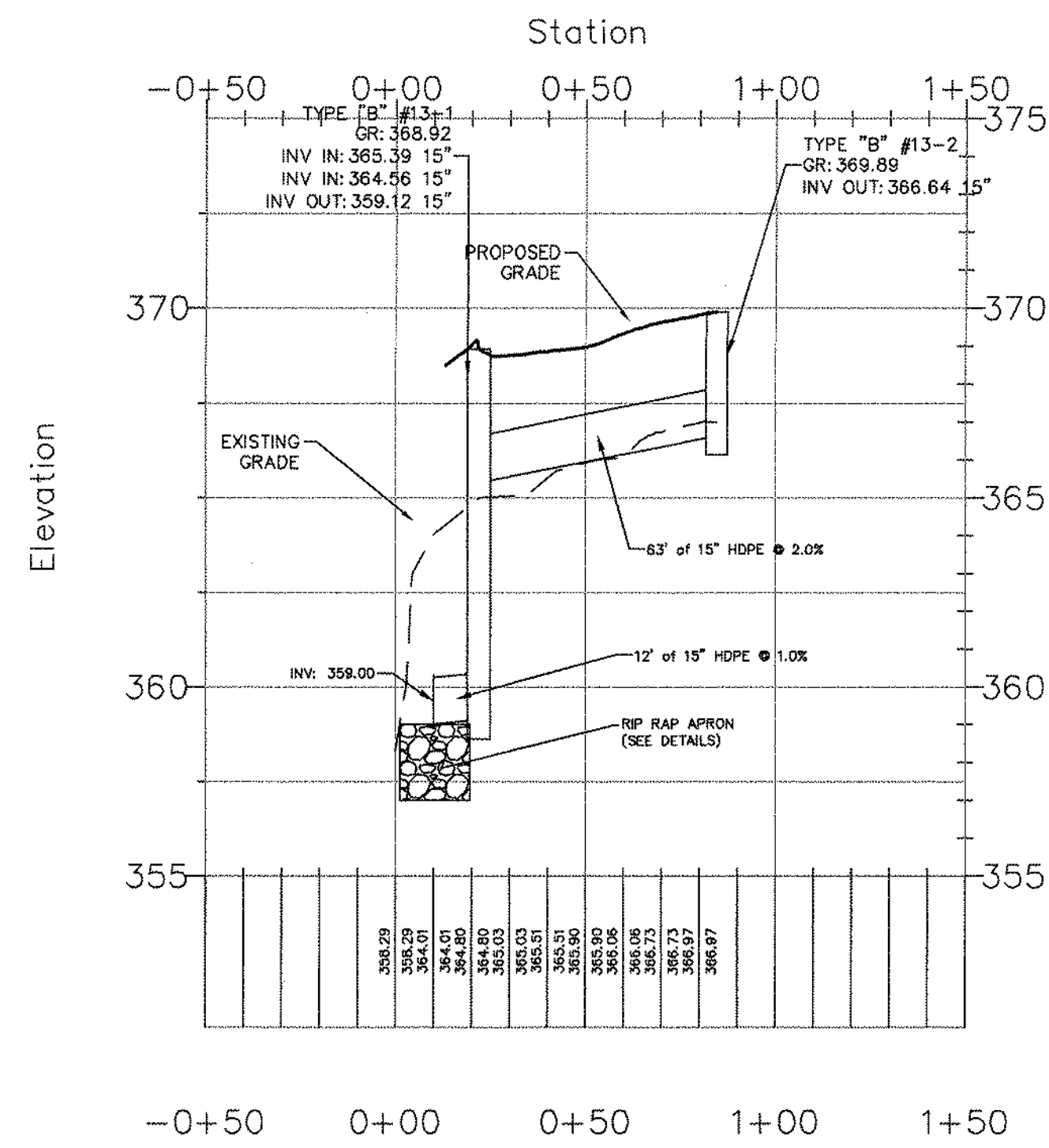
SP-7

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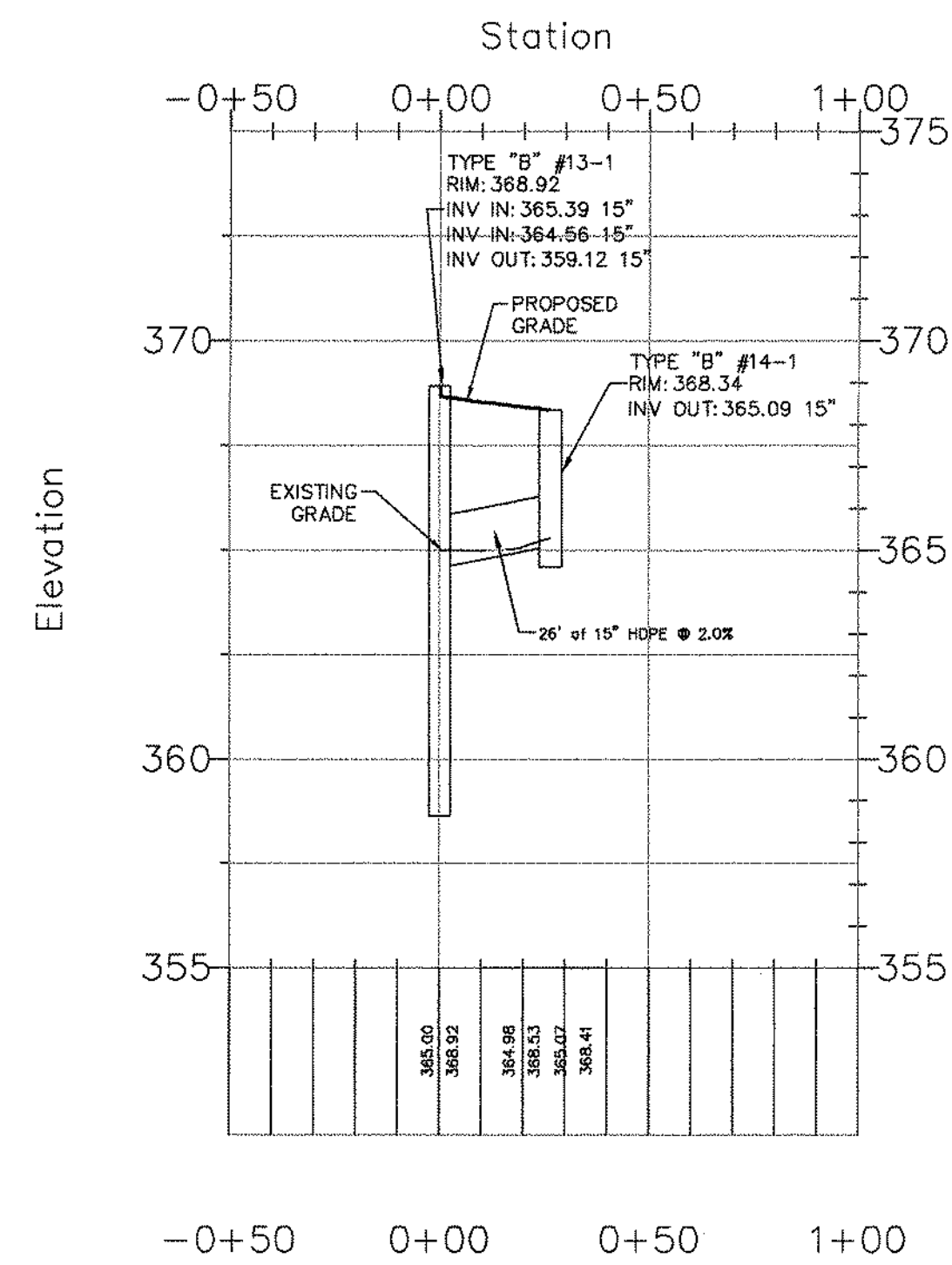
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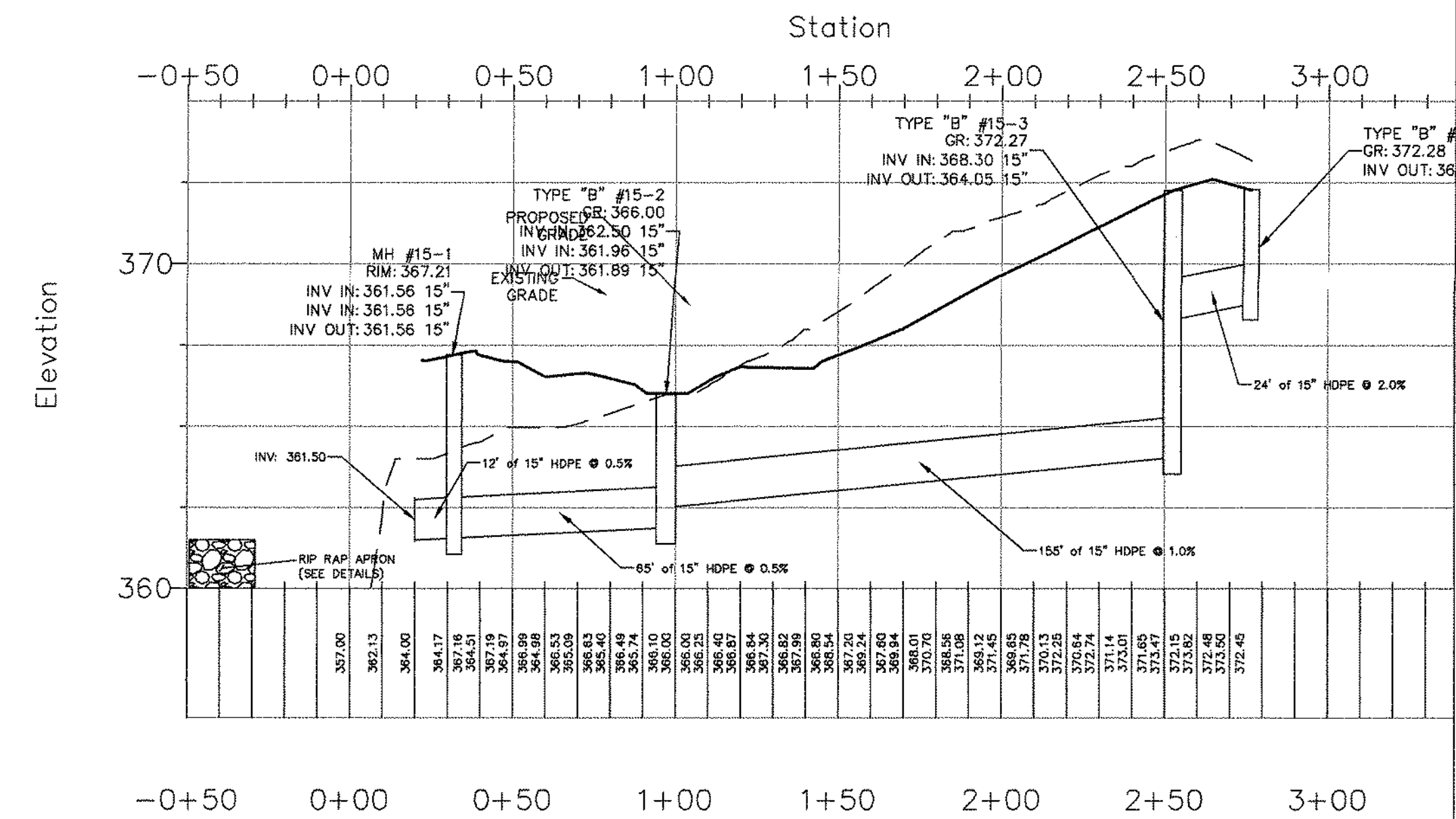
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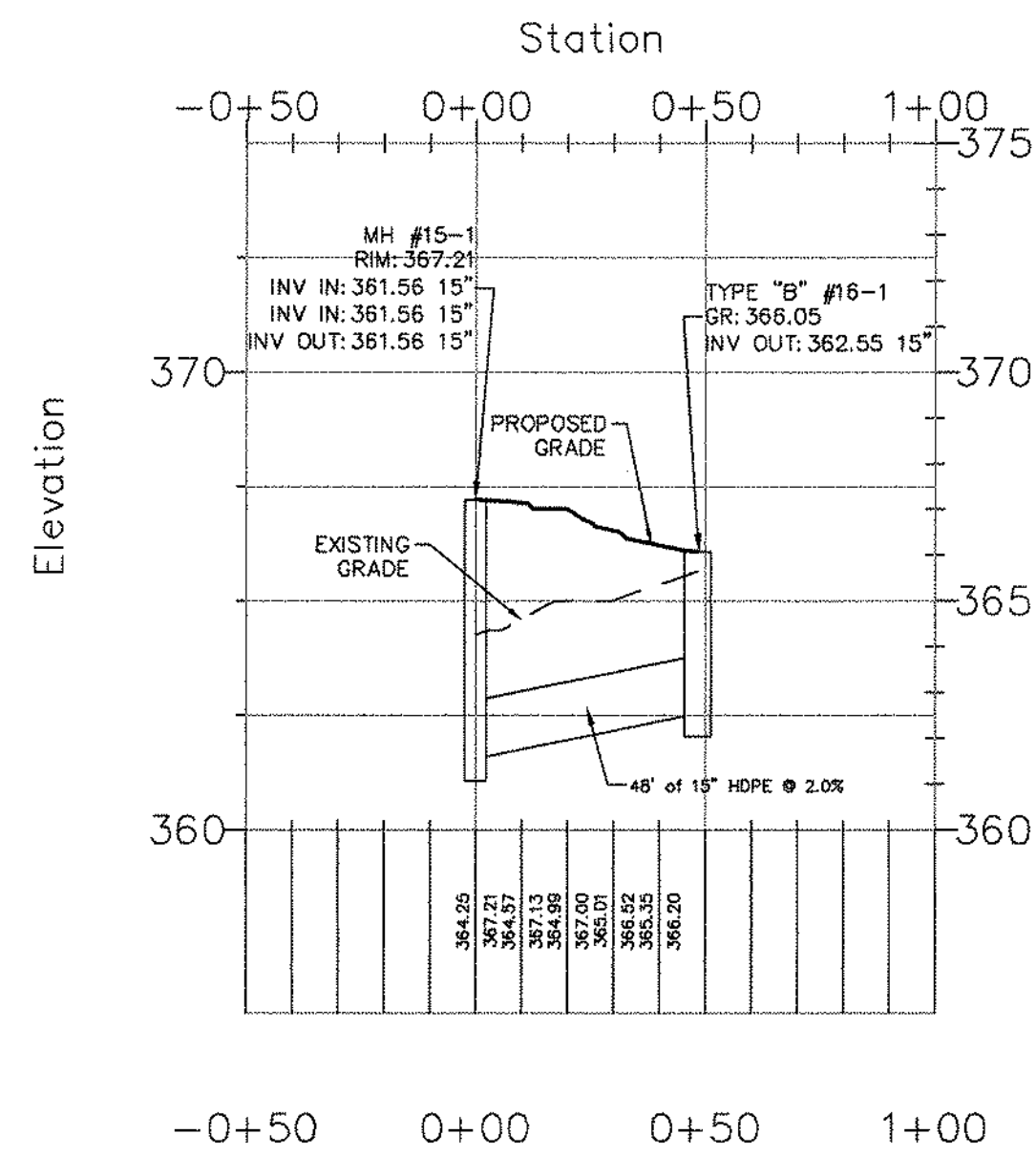
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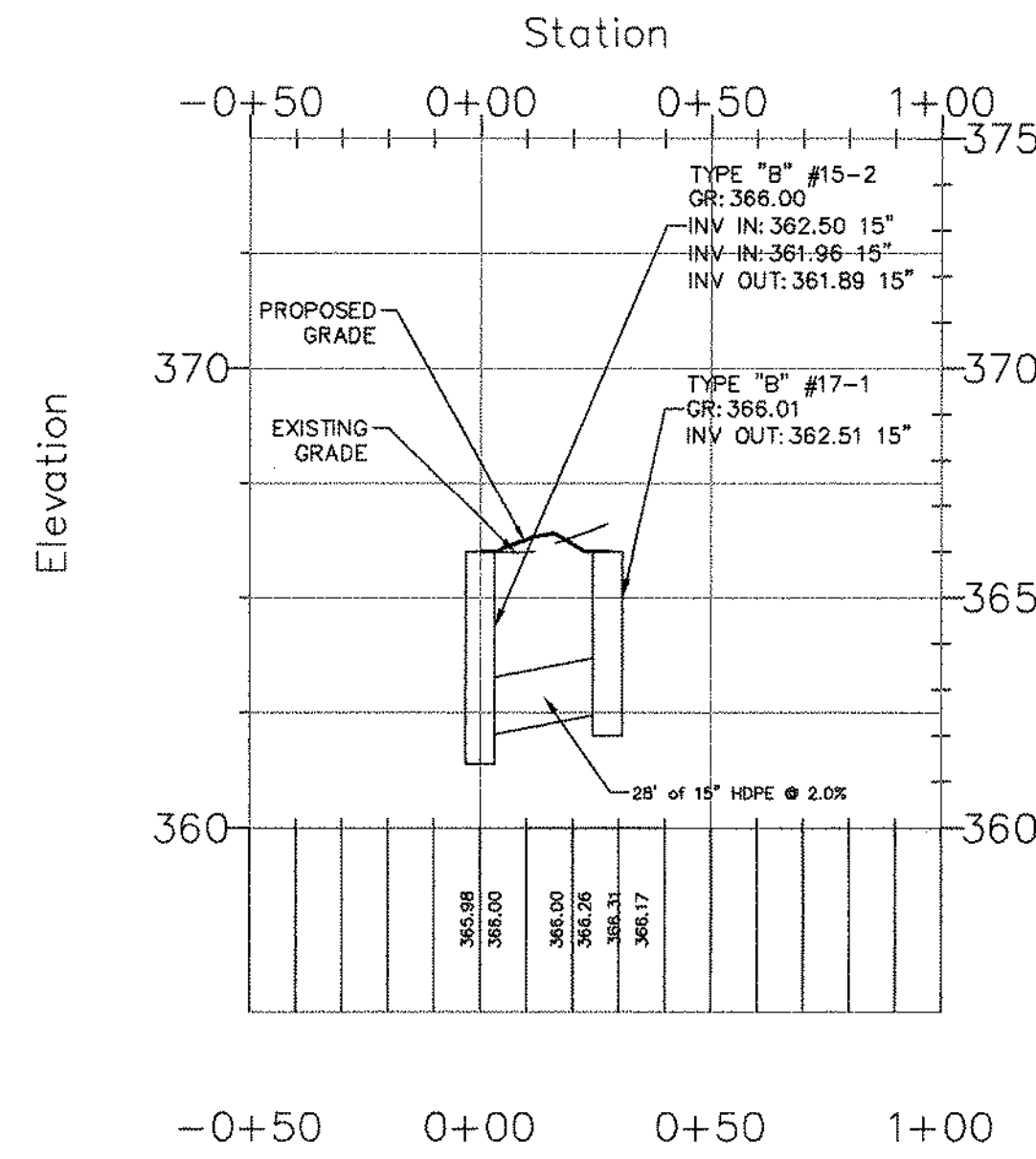
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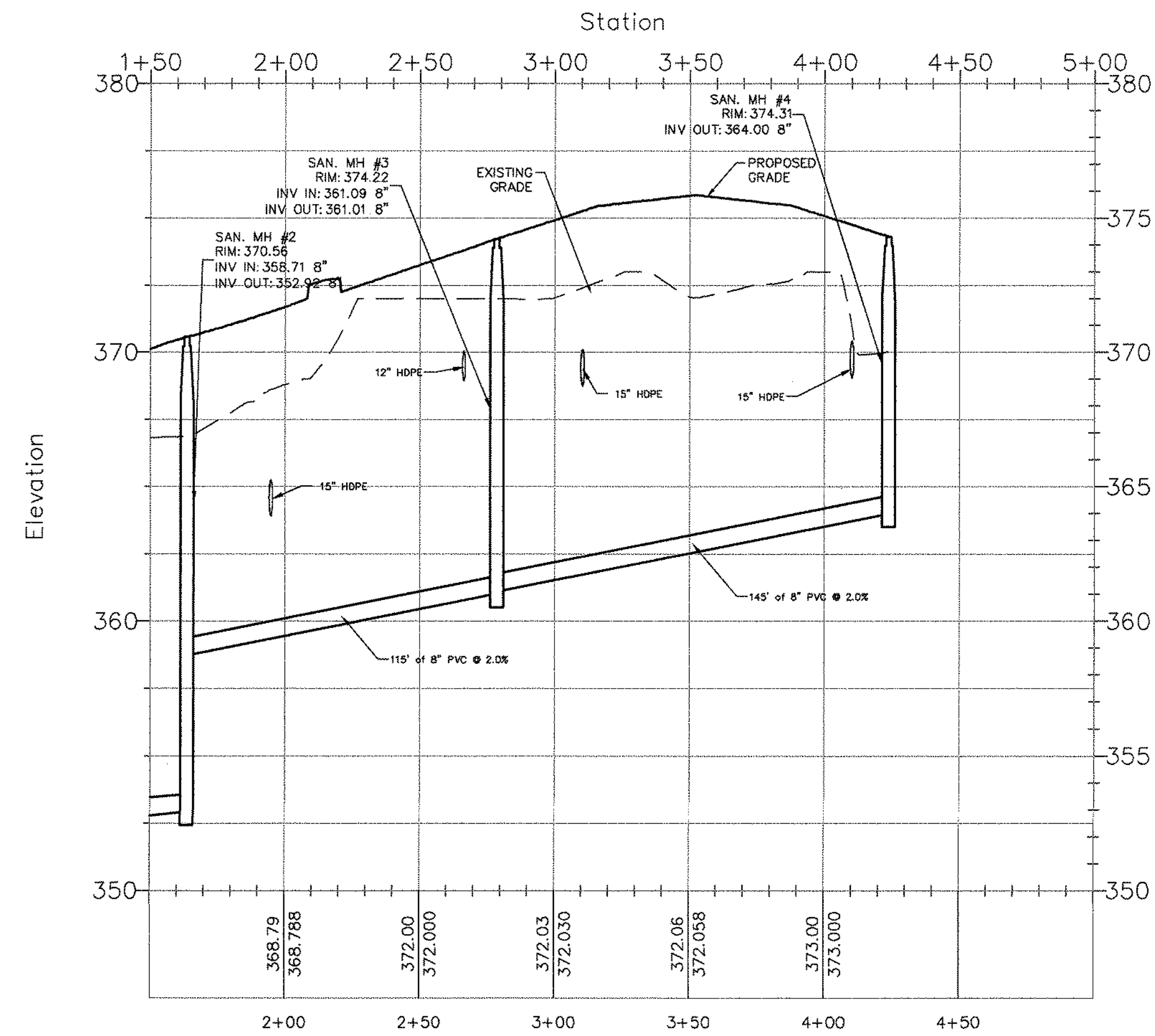
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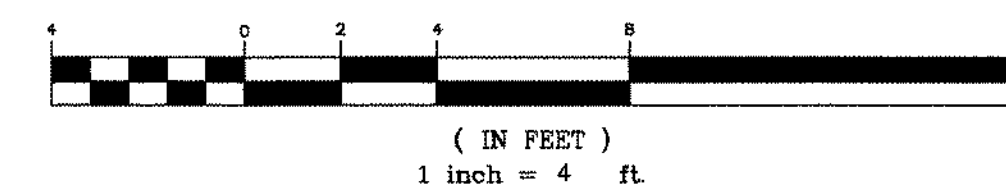
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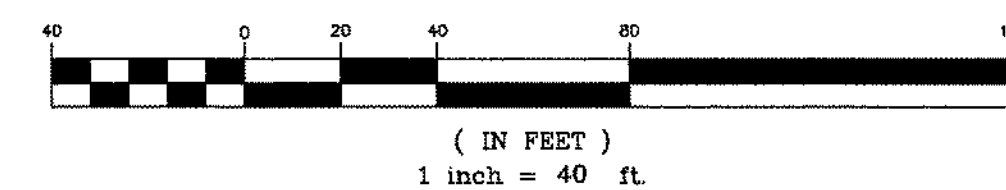
SANITARY SEWER PROFILE



VERTICAL GRAPHIC SCALE



HORIZONTAL GRAPHIC SCALE



8	NO CHANGE	03/07/2023	JMP
7	ISSUED TO PLANNING BOARD	10/03/2022	JMP
6	REVISED PER NJDEP COMMENTS	09/08/2020	JMP
5	REVISED PER NJDEP COMMENTS	02/28/2020	JMP
4	MODIFIED BUILDING AND PARKING LAYOUT	12/30/2019	JMP
REVISION	DESCRIPTION	DATE	BY

PRELIMINARY AND FINAL SITE PLAN APPLICATION

PREPARED FOR

REDWOOD, L.L.C.

200 PLEASANT VALLEY WAY
BLOCK 151 LOT 33
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY NEW JERSEY

DRIVEWAY & STORM SEWER PROFILES



Designer: JMP

Draftsman: DAK/SPD

Checked By: JMP

Project No.: 19-0012

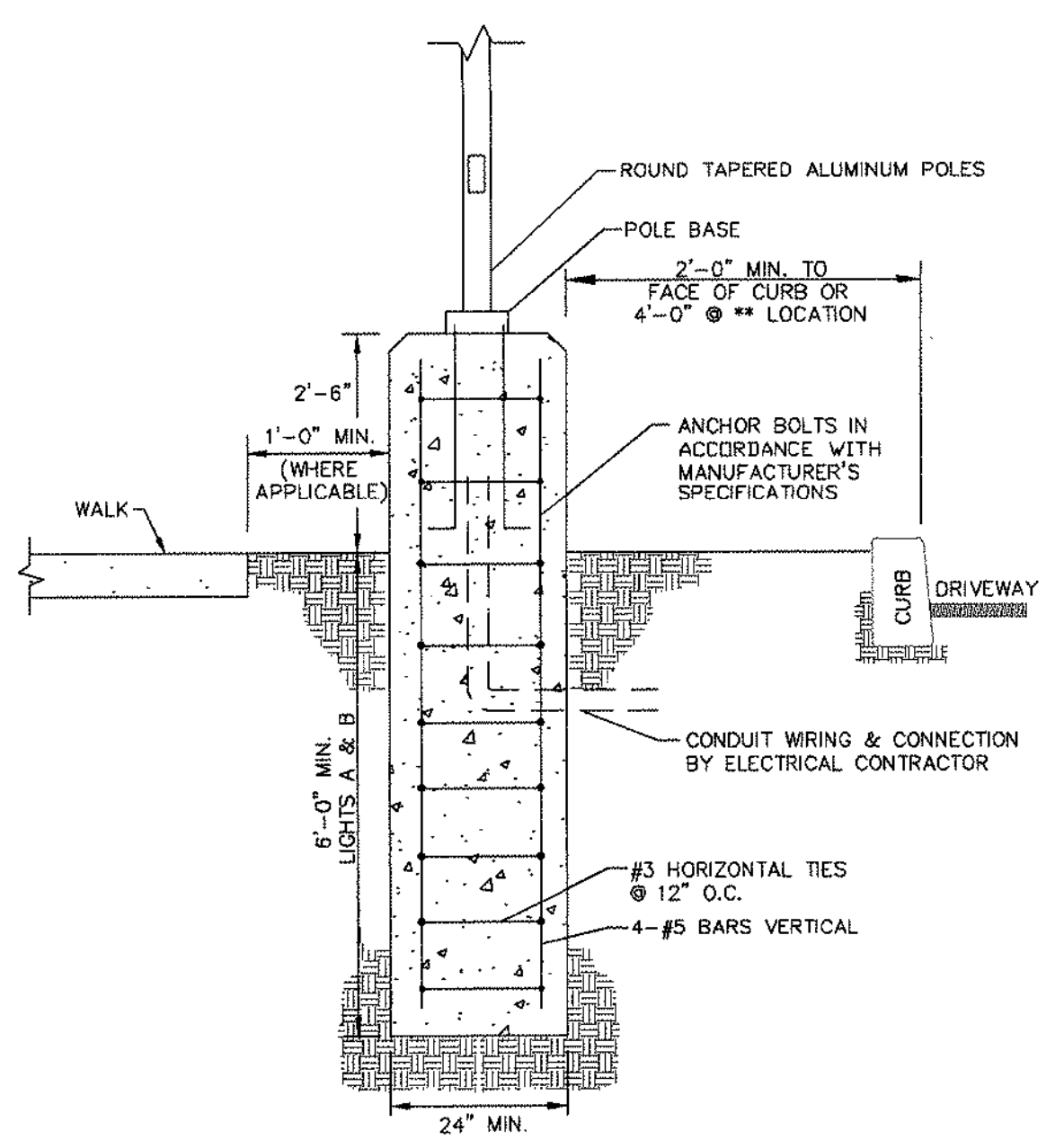
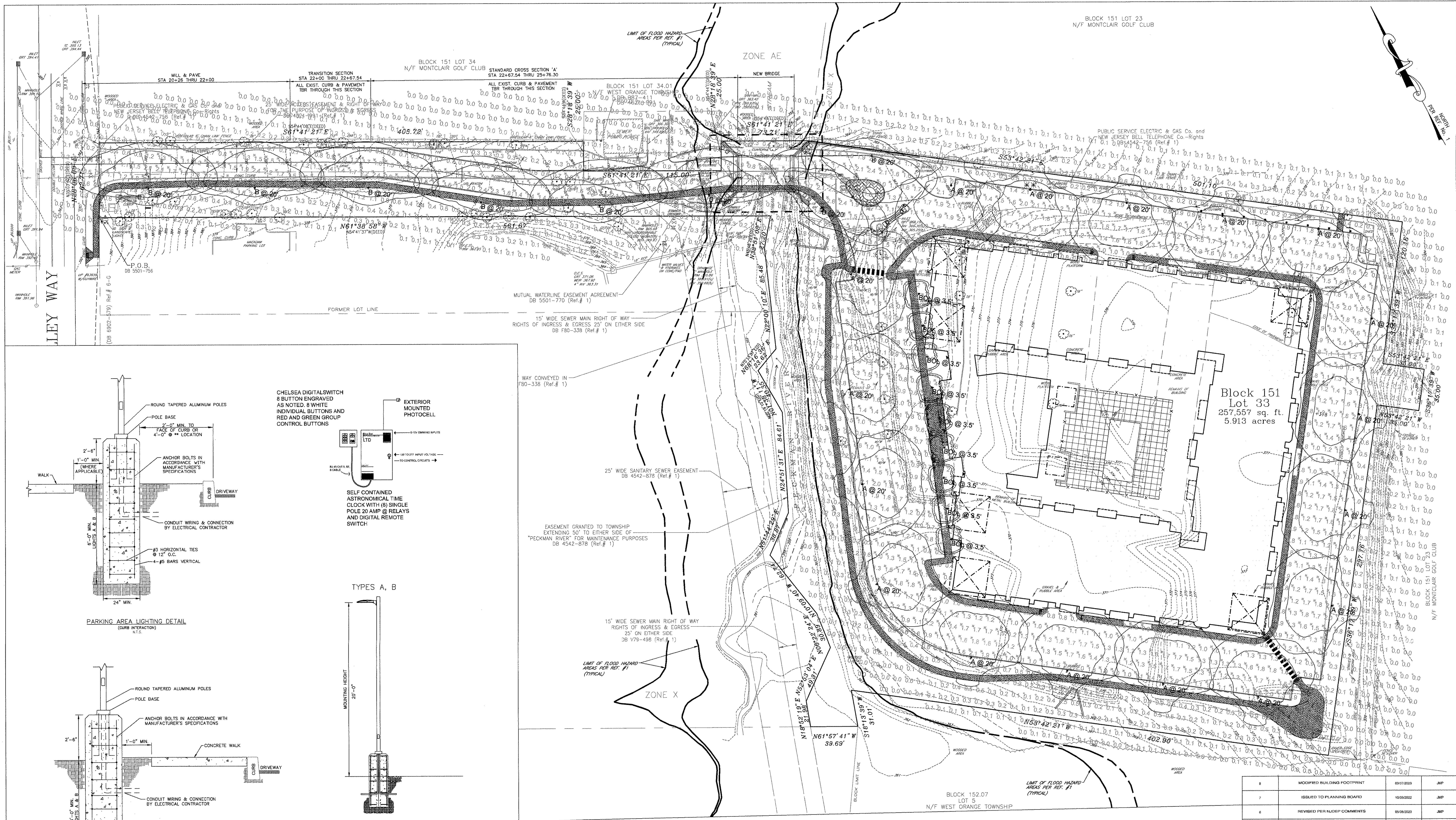
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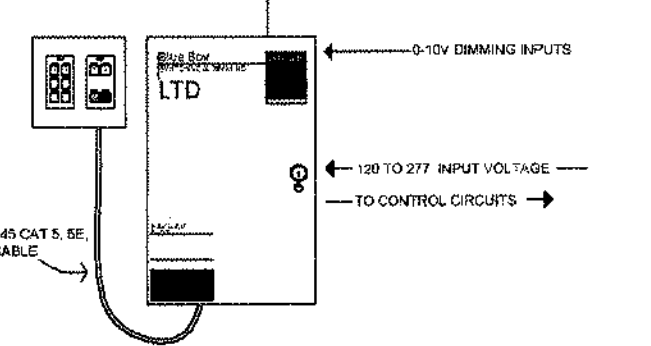
J. MICHAEL PETRY-PE, PP, RA
NJ PROFESSIONAL ENGINEER, LIC. NO. 38952

SP-8

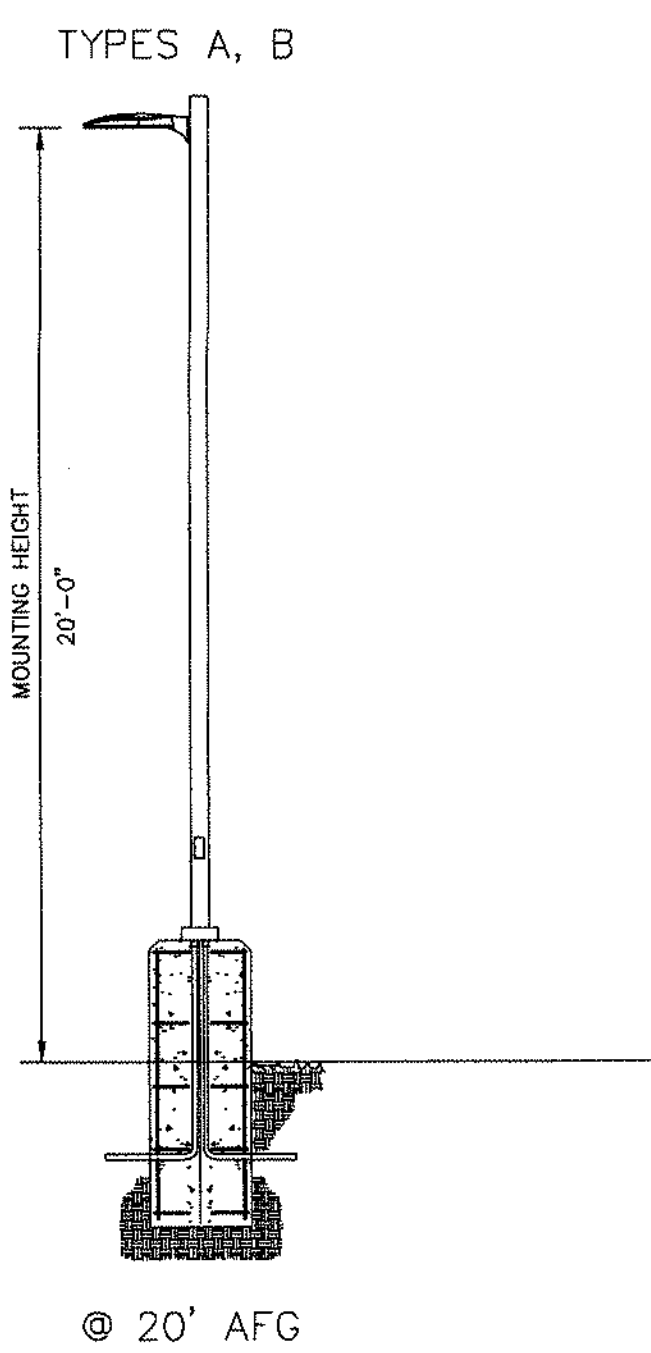
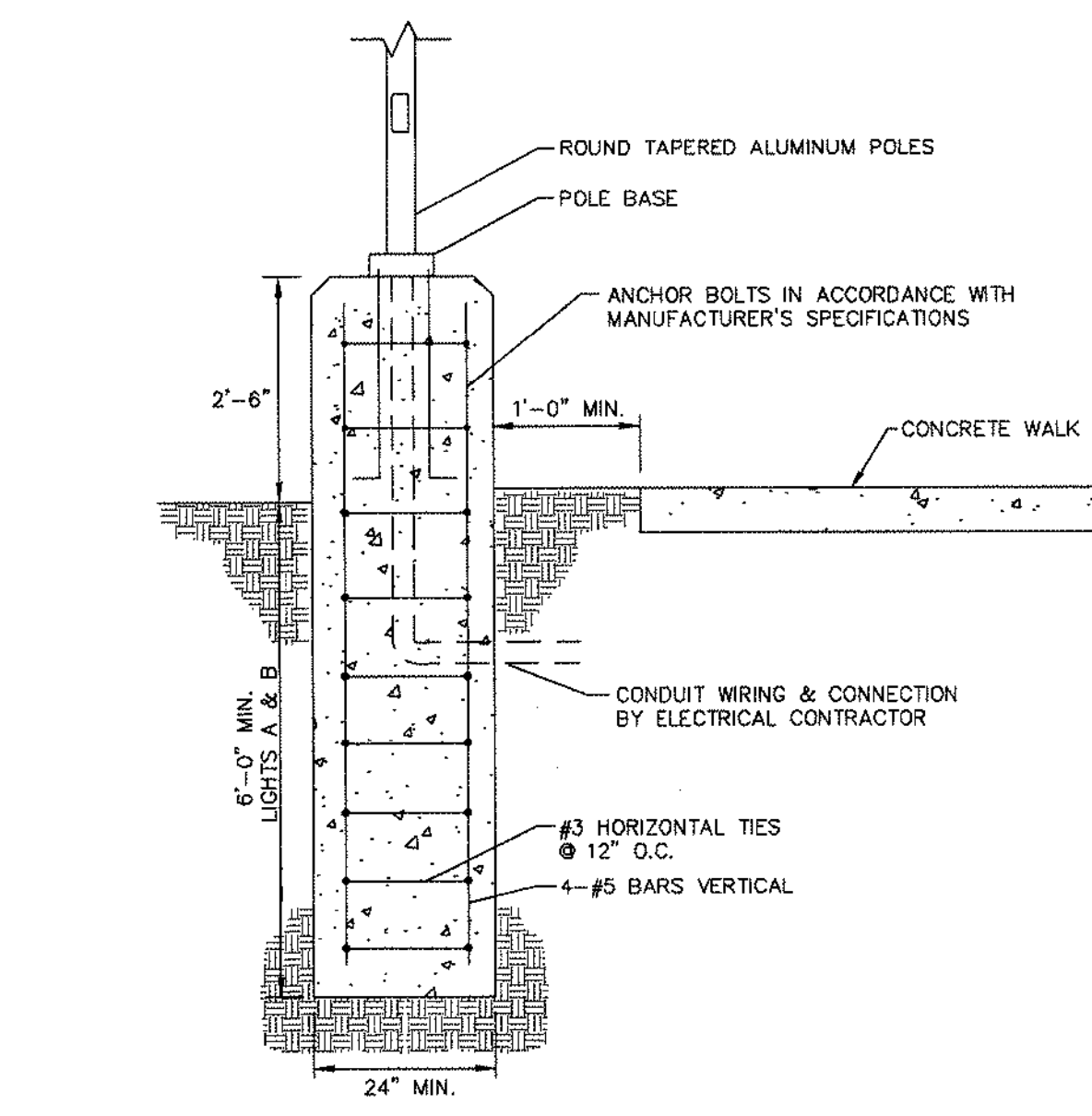
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CHelsea DIGITALSWITCH
8 BUTTON ENGRAVED
AS NOTED. 8 WHITE
INDIVIDUAL BUTTONS AND
RED AND GREEN GROUP
CONTROL BUTTONS

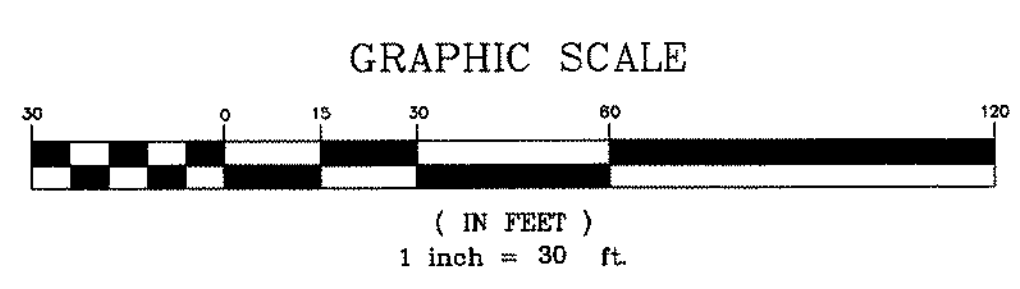


SELF-CONTAINED
ASTRONOMICAL TIME
CLOCK WITH (8) SINGLE
POLE 20 AMP RELAYS
AND DIGITAL REMOTE
SWITCH



Symbol	Label	Quantity	Manufacturer	Catalog Number	Description/Pole Mount	Lamp	Lumens Per Lamp	Light Loss Factor	Wattage
□	A	17	Lithonia Lighting	DSK1 LED P2 30K 1750-4545684-D1-COLOR-PG13	D-SERIES SIZE 1 FORMHARD 3000K 1750-4545684-D1-COLOR-PG13 ON 2.5' CONCRETE PIER 20' OVERALL MOUNT HEIGHT	LED	8257	0.8	70
□	B	8	Lithonia Lighting	DSK1 LED P2 30K 1750-4545684-D1-COLOR-PG13	D-SERIES SIZE 1 TYPE 2 3000K 1750-4545684-D1-COLOR-PG13 ON 2.5' CONCRETE PIER 20' OVERALL MOUNT HEIGHT	LED	8240	0.8	70
□	BOL	9	Lithonia Lighting	DSK1 LED P2 30K 1750-4545684-D1-COLOR-PG13	D-SERIES BOLLARD WITH 12 3000K LEDS OPERATED AT 830mA AND ASYMMETRIC DISTRIBUTION	LED	1719	0.8	22

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
OVERALL @ GRADE	+	0.7 fc	12.4 fc	0.0 fc	N/A	N/A
PARKING @ GRADE	×	1.4 fc	12.4 fc	0.4 fc	31.0:1	3.5:1



CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN A RAISED IMPRESSION SEAL OF THE UNDERSIGNED PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT.

#	DESCRIPTION	DATE	BY
8	MODIFIED BUILDING FOOTPRINT	03/01/2023	JMP
7	ISSUED TO PLANNING BOARD	10/09/2022	JMP
6	REVIEWED PER NJDEP COMMENTS	06/09/2020	JMP
5	REVIEWED PER NJDEP COMMENTS	02/09/2019	JMP
4	MODIFIED BUILDING AND PARKING LAYOUT	10/09/2019	JMP
2	MODIFICATION TO BUILDING/SITE OWNERS NJDEP SUBMITTAL DATA	09/29/2017	JMP
1	UPDATED FOR COMPLETENESS PER BOARD PROFESSIONALS	04/18/2017	JMP
REVISION	DESCRIPTION	DATE	BY

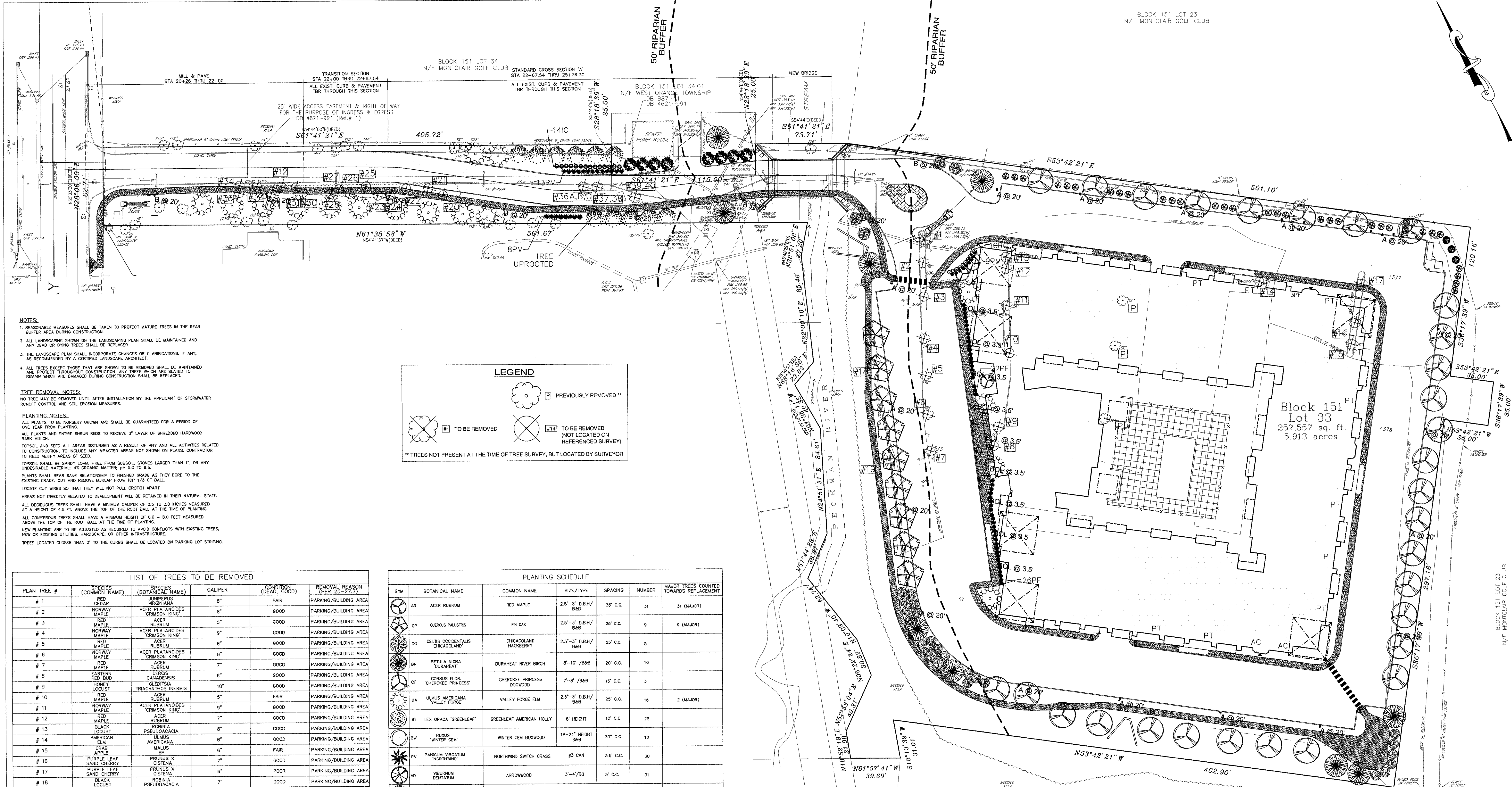
PRELIMINARY AND FINAL SITE PLAN APPLICATION
PREPARED FOR
REDWOOD, L.L.C.
200 PLEASANT VALLEY WAY
BLOCK 151 LOT 33
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY NEW JERSEY

LIGHTING PLAN

PETRY ENGINEERING, LLC
DIVISION OF CHESAPEAKE UNIVERSAL CONSULTING ENGINEERS
100 HUNTERS LANE SUITE 200
HUNTERDON, NJ 08834
TEL: 908.207.7000 FAX: 908.207.7000

Designer: JMP
Draftsman: DJV/SPD
Checked By: JMP
Project No: 19-0019
Scale: 1" = 30'
Sheet: **SP-9**

J. MICHAEL PETRY-PE, PP, RA
NJ PROFESSIONAL ENGINEER LICENSE NO. 36962
DATED: 12/10/16



- NOTES:**
1. REASONABLE MEASURES SHALL BE TAKEN TO PROTECT MATURE TREES IN THE REAR BUFFER AREA DURING CONSTRUCTION.
 2. ALL LANDSCAPING SHOWN ON THE LANDSCAPING PLAN SHALL BE MAINTAINED AND ANY DEAD OR DYING TREES SHALL BE REPLACED.
 3. THE LANDSCAPE PLAN SHALL INCORPORATE CHANGES OR CLARIFICATIONS, IF ANY, AS RECOMMENDED BY A CERTIFIED LANDSCAPE ARCHITECT.
 4. ALL TREES EXCEPT THOSE THAT ARE SHOWN TO BE REMOVED SHALL BE MAINTAINED AND PROTECTED THROUGHOUT CONSTRUCTION. ANY TREES WHICH ARE SLATED TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED.

TREE REMOVAL NOTES:

NO TREE MAY BE REMOVED UNTIL AFTER INSTALLATION BY THE APPLICANT OF STORMWATER RUNOFF CONTROL AND SOIL EROSION MEASURES.

PLANTING NOTES:

ALL PLANTS TO BE NURSERY GROWN AND SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM PLANTING.

ALL PLANTS AND ENTIRE SHRUB BEDS TO RECEIVE 3" LAYER OF SHREDDED HARDWOOD BARK MULCH.

TOPSOIL AND SEED ALL AREAS DISTURBED AS A RESULT OF ANY AND ALL ACTIVITIES RELATED TO CONSTRUCTION, TO INCLUDE ANY IMPACTED AREAS NOT SHOWN ON PLANS. CONTRACTOR TO FILL VERTICALLY AREAS OF SEED.

TOPSOIL SHALL BE SANDY LOAM, FREE FROM SUBSOL STONES LARGER THAN 1", OR ANY UNDESIRABLE MATERIAL; 4% ORGANIC MATTER; pH 5.0 TO 6.5.

PLANTS SHALL BEAR SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO THE EXISTING GRADE. CUT AND REMOVE BURLAP FROM TOP 1/3 OF BALL.

LOCATE GUY WIRES SO THAT THEY WILL NOT PULL CROTCH APART.

AREAS NOT DIRECTLY RELATED TO DEVELOPMENT WILL BE RETAINED IN THEIR NATURAL STATE.

ALL DECIDUOUS TREES SHALL HAVE A MINIMUM CALIPER OF 2.5 TO 3.0 INCHES MEASURED AT A HEIGHT OF 4.5 FT. ABOVE THE TOP OF THE ROOT BALL AT THE TIME OF PLANTING.

ALL CONIFEROUS TREES SHALL HAVE A MINIMUM HEIGHT OF 6.0 - 8.0 FEET MEASURED ABOVE THE TOP OF THE ROOT BALL AT THE TIME OF PLANTING.

NEW PLANTING ARE TO BE ADJUSTED AS REQUIRED TO AVOID CONFLICTS WITH EXISTING TREES, NEW OR EXISTING UTILITIES, HARDSCAPE, OR OTHER INFRASTRUCTURE.

TREES LOCATED CLOSER THAN 3' TO THE CURBS SHALL BE LOCATED ON PARKING LOT STRIPING.

LEGEND

[Symbol] #1 TO BE REMOVED

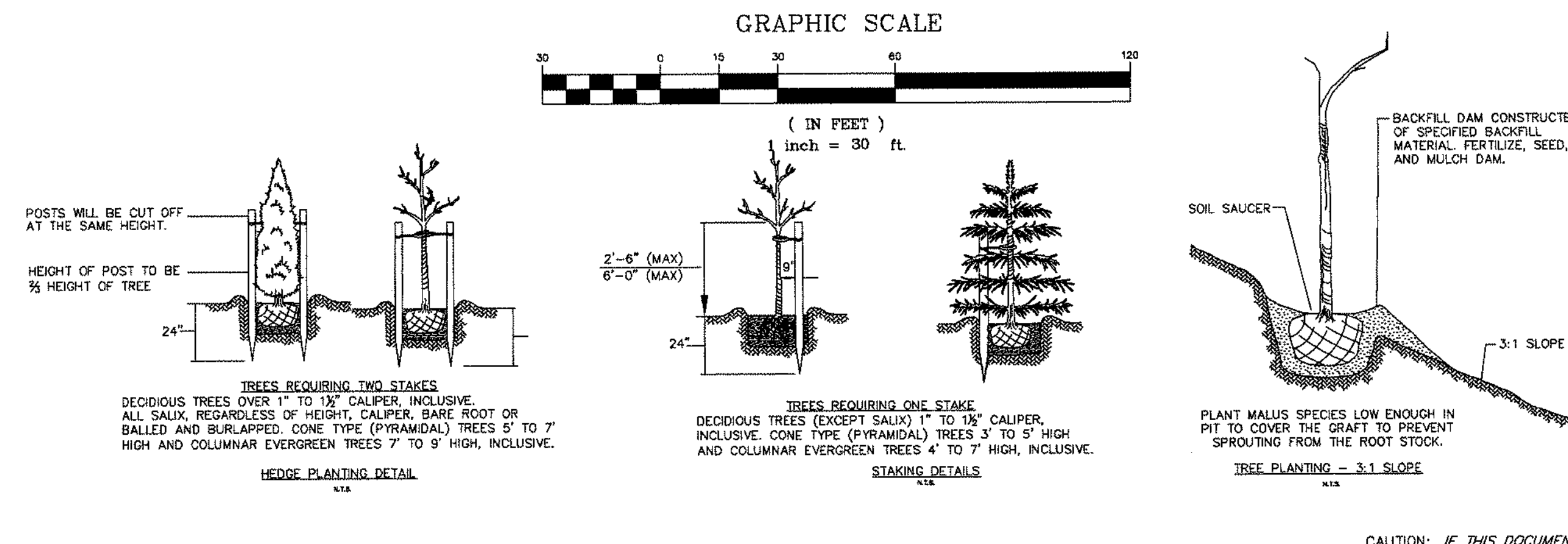
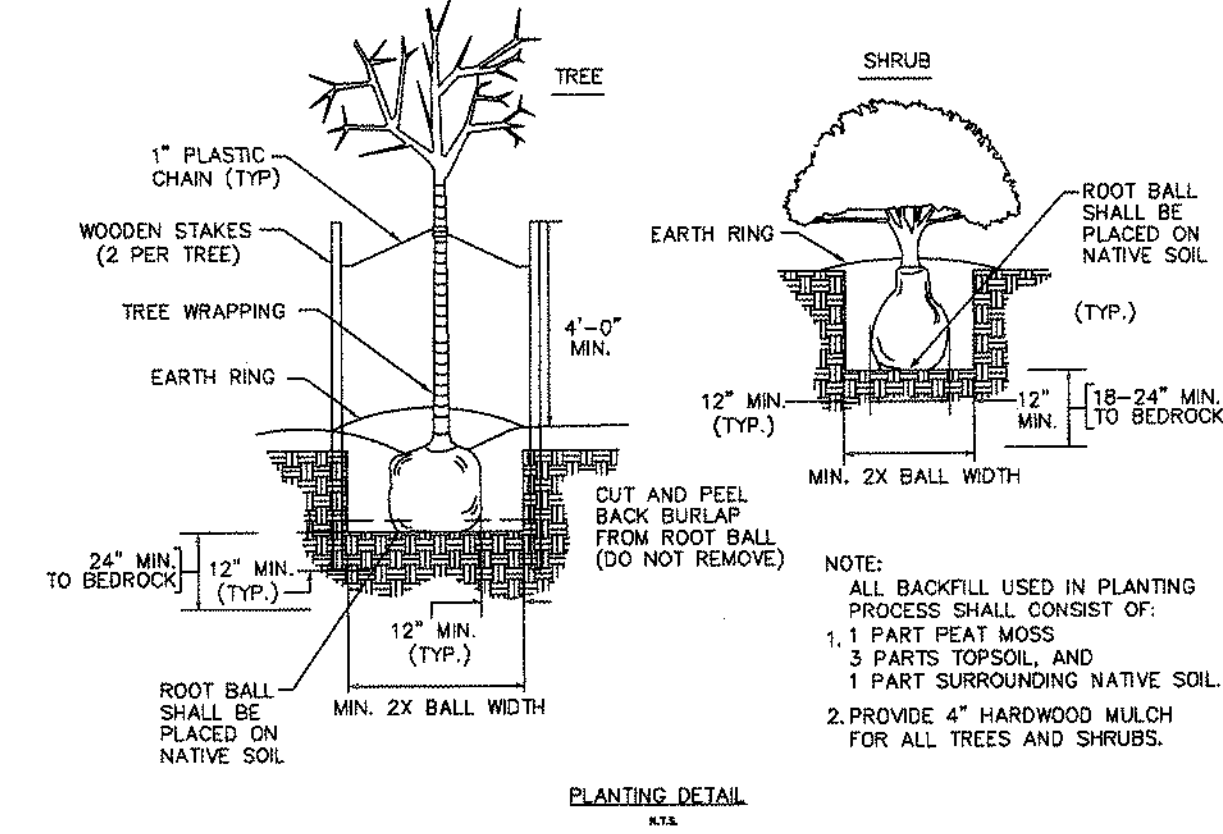
[Symbol] #14 TO BE REMOVED (NOT LOCATED ON REFERENCED SURVEY)

** TREES NOT PRESENT AT THE TIME OF TREE SURVEY, BUT LOCATED BY SURVEYOR

LIST OF TREES TO BE REMOVED					
PLAN TREE #	SPECIES (COMMON NAME)	SPECIES (BOTANICAL NAME)	CALIPER	CONDITION (DEAD, GOOD)	REMOVAL REASON
# 1	RED CEDAR	JUNIPERUS VIRGINIANA	8"	FAIR	PARKING/BUILDING AREA
# 2	NORWAY SPRUCE	ABIES NORWAY	8"	GOOD	PARKING/BUILDING AREA
# 3	RED MAPLE	ACER RUBRUM	5"	GOOD	PARKING/BUILDING AREA
# 4	NORWAY SPRUCE	ABIES NORWAY	9"	GOOD	PARKING/BUILDING AREA
# 5	RED MAPLE	ACER RUBRUM	6"	GOOD	PARKING/BUILDING AREA
# 6	NORWAY SPRUCE	ABIES NORWAY	8"	GOOD	PARKING/BUILDING AREA
# 7	RED MAPLE	ACER RUBRUM	7"	GOOD	PARKING/BUILDING AREA
# 8	EASTERN RED BUD	GERONIA CANADENSIS	6"	GOOD	PARKING/BUILDING AREA
# 9	HONEY LOCUST	GLYCERHIZA INERMIS	10"	GOOD	PARKING/BUILDING AREA
# 10	RED MAPLE	ACER RUBRUM	5"	FAIR	PARKING/BUILDING AREA
# 11	NORWAY SPRUCE	ABIES NORWAY	9"	GOOD	PARKING/BUILDING AREA
# 12	RED MAPLE	ACER RUBRUM	7"	GOOD	PARKING/BUILDING AREA
# 13	BLACK LOCUST	ROBINIA PSEUDOACACIA	8"	GOOD	PARKING/BUILDING AREA
# 14	AMERICAN ELM	ULMUS AMERICANA	6"	GOOD	PARKING/BUILDING AREA
# 15	GRAY ALDER	ALNUS SP.	6"	FAIR	PARKING/BUILDING AREA
# 16	PURPLE LEAF SAND CHERRY	PRUNUS X OSTERNA	7"	GOOD	PARKING/BUILDING AREA
# 17	PURPLE LEAF SAND CHERRY	PRUNUS X OSTERNA	7"	GOOD	PARKING/BUILDING AREA
# 18	BLACK LOCUST	ROBINIA PSEUDOACACIA	7"	GOOD	PARKING/BUILDING AREA
# 19	BLACK LOCUST	ROBINIA PSEUDOACACIA	7"	GOOD	PARKING/BUILDING AREA
# 20	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	5"	FAIR	SIDEWALK/ENTRY DRIVE
# 21	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	5"	FAIR	SIDEWALK/ENTRY DRIVE
# 22	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	5"	GOOD	SIDEWALK/ENTRY DRIVE
# 23	NORTHERN CATALPA	CATALPA SPECIOSA	12"	FAIR	SIDEWALK/ENTRY DRIVE
# 24	NORTHERN CATALPA	CATALPA SPECIOSA	11"	FAIR	SIDEWALK/ENTRY DRIVE
# 25	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	6"	GOOD	SIDEWALK/ENTRY DRIVE
# 26	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	5"	GOOD	SIDEWALK/ENTRY DRIVE
# 27	TREE OF HEAVEN	ALNUS ALTISSIMA	9"	FAIR	SIDEWALK/ENTRY DRIVE
# 28	RED MAPLE	ACER RUBRUM	6"	GOOD	SIDEWALK/ENTRY DRIVE
# 29	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	5"	GOOD	SIDEWALK/ENTRY DRIVE
# 30	BLACK LOCUST	ROBINIA PSEUDOACACIA	11"	FAIR	SIDEWALK/ENTRY DRIVE
# 31	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	5"	GOOD	SIDEWALK/ENTRY DRIVE
# 32	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	5"	GOOD	SIDEWALK/ENTRY DRIVE
# 33	GREEN ASH	FRAXINUS PENNSYLVANICA	9"	FAIR	SIDEWALK/ENTRY DRIVE
# 34	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	5"	GOOD	SIDEWALK/ENTRY DRIVE
# 35	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	5"	GOOD	SIDEWALK/ENTRY DRIVE
# 36	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	6"	GOOD	SIDEWALK/ENTRY DRIVE
# 37	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	4"	GOOD	SIDEWALK/ENTRY DRIVE
# 38	EASTERN ARBORVITAE	THUJA OCCIDENTALIS	4"	GOOD	SIDEWALK/ENTRY DRIVE
# 39	EASTERN WHITE PINE	PINUS STROBUS	9"	POOR	SIDEWALK/ENTRY DRIVE
# 40	EASTERN WHITE PINE	PINUS STROBUS	7"	POOR	SIDEWALK/ENTRY DRIVE

PLANTING SCHEDULE						
SYM	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	SPACING	NUMBER	MAJOR TREES COUNTED TOWARDS REPLACEMENT
AR	ACER RUBRUM	RED MAPLE	2.5"-3" D.B.H./B&B	35' C.C.	31	31 (MAJOR)
OP	QUERCUS PALSTRIS	PN OAK	2.5"-3" D.B.H./B&B	25' C.C.	9	9 (MAJOR)
CO	CELTIS OCCIDENTALIS	CHICAGO/AND HACKBERRY	2.5"-3" D.B.H./B&B	25' C.C.	5	
BN	BETULA NIGRA	DURAHEAT RIVER BIRCH	8'-10' /B&B	20' C.C.	10	
OF	CORNUS FLOR.	CHEROKEE PRINCESS	7'-8' /B&B	15' C.C.	3	
UA	ULMUS AMERICANA	VALLEY FORGE ELM	2.5"-3" D.B.H./B&B	25' C.C.	16	2 (MAJOR)
IO	ILEX OPACA	'GREENLEAF'	6' HEIGHT	10' C.C.	25	
BW	BUXUS	'WINTER GEM'	18-24" HEIGHT	30' C.C.	10	
PV	PANICUM VIRGATUM	NORTHWIND SWITCH GRASS	#3 CAN	3.5' C.C.	30	
VO	VIBURNUM DENTATUM	ARROWWOOD	3'-4'/B&B	5' C.C.	31	
MP	MORELLA PENNSYLVANICA	BAYBERRY	#3 CAN	4' C.C.	48	
PS	PINUS STROBUS	WHITE PINE	6' HEIGHT	8' C.C.	4	
JV	JUNIPERUS VIRGINIANA	RED CEDAR	6' HEIGHT	10' C.C.	6	
IC	ILEX CRENATA	'HODGENDORF'	15"-18" HEIGHT	3' C.C.	14	
PA	PICEA ABIES	NORWAY SPRUCE	8' MIN. HEIGHT	6' C.C.	12	

* 21 MAJOR TREES REMOVED, 42 MAJOR TREES COUNTED TOWARD REPLACEMENT
21 MINOR TREES REMOVED, 0 MINOR TREES COUNTED TOWARD REPLACEMENT



8 MODIFIED BUILDING FOOTPRINT 03/07/2023 J.M.P.

7 ISSUED TO PLANNING BOARD 10/03/2022 J.M.P.

6 REVISED PER NDEP COMMENTS 06/06/2020 J.M.P.

5 REVISED PER NDEP COMMENTS 02/28/2020 J.M.P.

4 MODIFIED BUILDING AND PARKING LAYOUT 10/05/2019 J.M.P.

3 MODIFICATION TO BUILDING'S DRIVINGS NDEP SUBMITTAL DATA 09/29/2017 J.M.P.

2 UPDATED PER SITE WALK W/ FORESTER 04/25/2017 J.M.P.

1 UPDATED FOR COMPLETENESS PER BOARD PROFESSIONALS 04/12/2017 J.M.P.

REVISION DESCRIPTION DATE BY

PRELIMINARY AND FINAL SITE PLAN APPLICATION PREPARED FOR

REDWOOD, L.L.C.

200 PLEASANT VALLEY WAY
BLOCK 151 LOT 33
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY NEW JERSEY

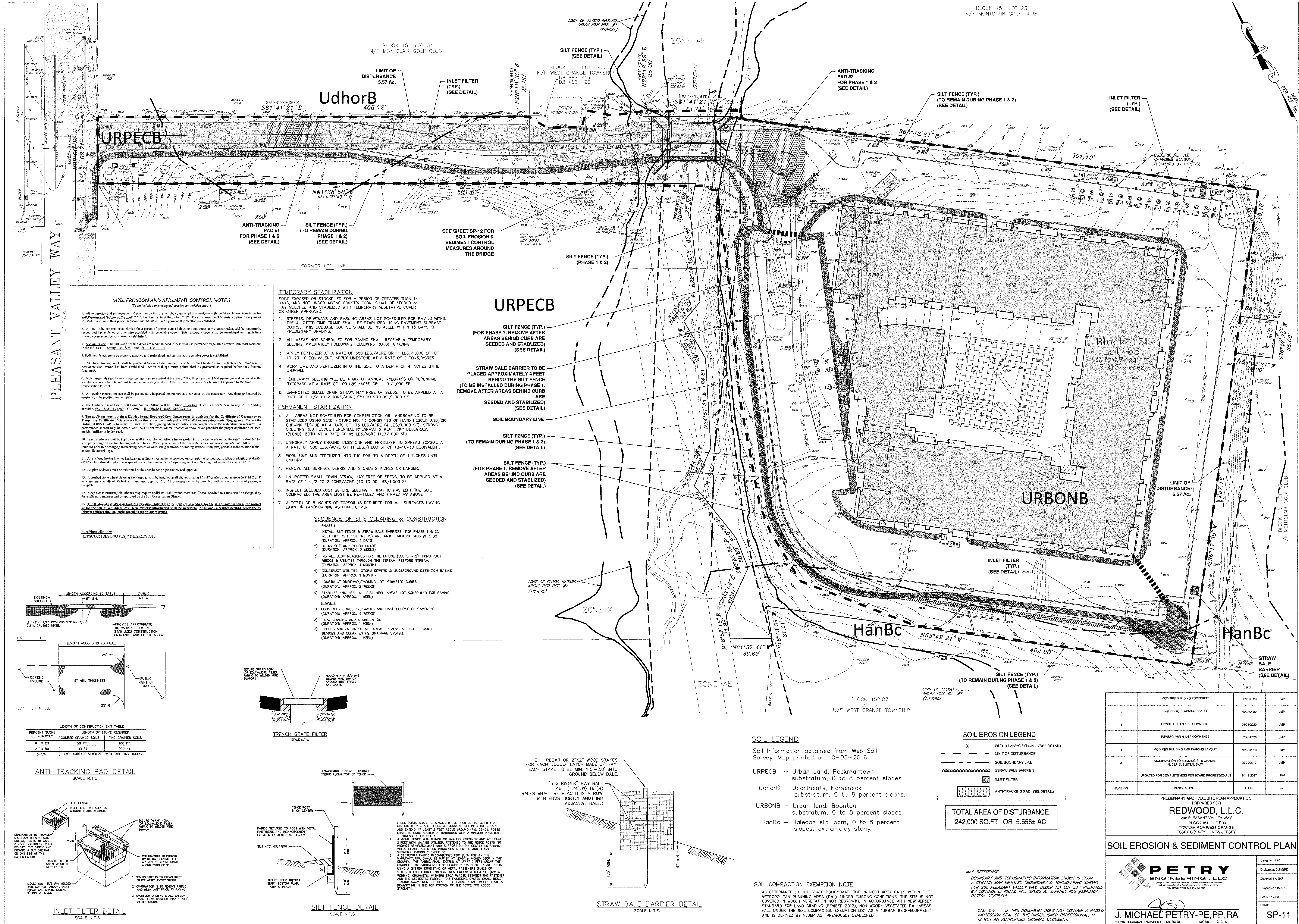
LANDSCAPE/TREE REMOVAL PLAN

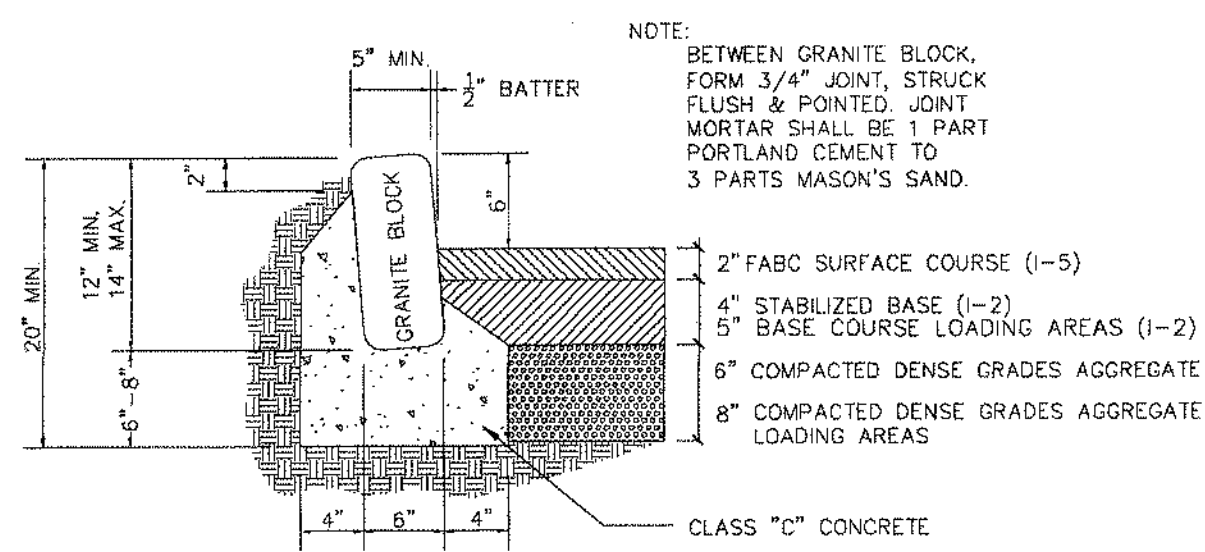
PETRY ENGINEERING, LLC
DIVISION OF CONSTRUCTION SERVICES, LICENSED AS A SUBSIDIARY OF CONSTRUCTION SERVICES, INC.
1000 WEST ORANGE AVENUE, SUITE 200
WEST ORANGE, NJ 07063
TEL: 973.227.7764 FAX: 973.227.7765

Designer: J.M.P.
Draftsman: D.J.K.R.P.
Checked By: J.M.P.
Project No: 16-0012
Scale: 1" = 30'
Sheet: SP-10

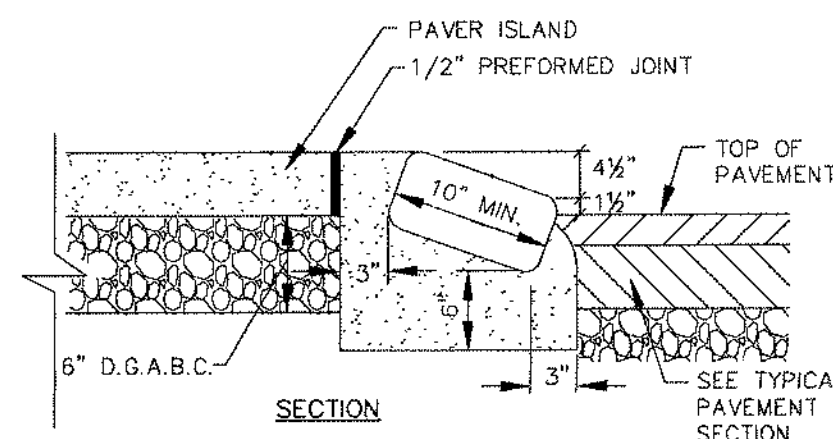
J. MICHAEL PETRY-PE, PP, RA
NJ PROFESSIONAL ENGINEER, LICENSE NO. 30986 DATED 12/15/16

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN A RAISED IMPRESSION SEAL OF THE UNDERSIGNED PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT.

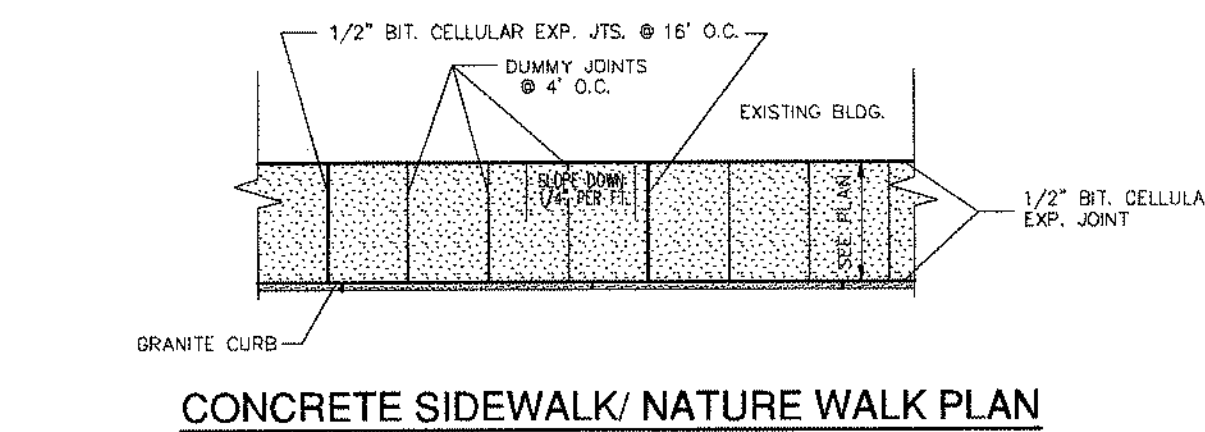




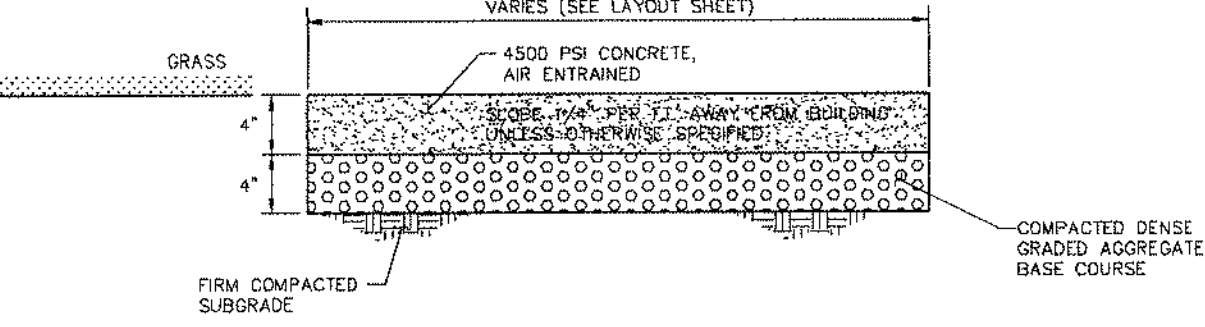
GRANITE BLOCK CURB & PAVEMENT SECTION DETAIL
SCALE - N.T.S.



MOUNTABLE CURB DETAIL
SCALE - N.T.S.

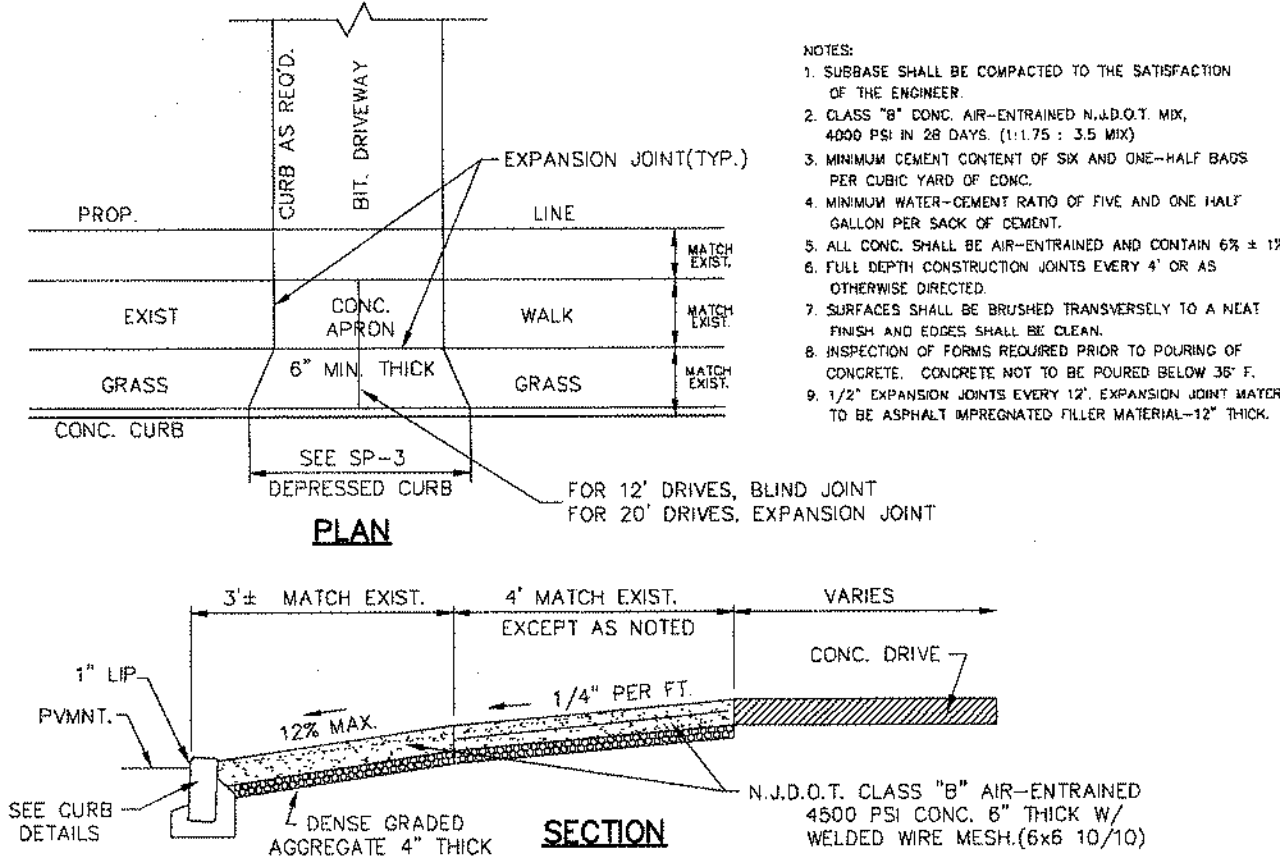


CONCRETE SIDEWALK/ NATURE WALK PLAN

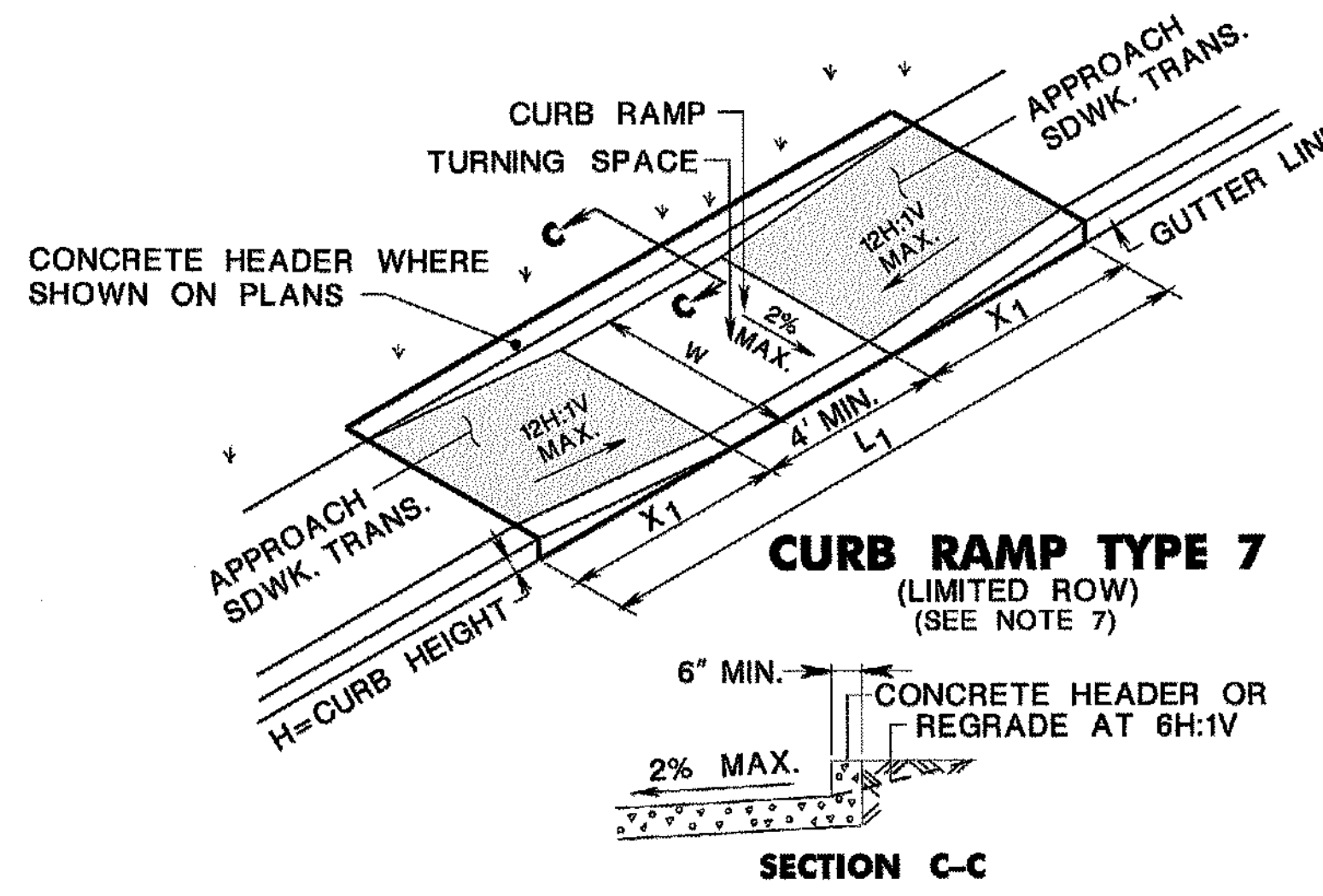


CONCRETE SIDEWALK/ NATURE WALK SECTION

CONCRETE SIDEWALK/ NATURE WALK DETAIL
SCALE - N.T.S.



CONCRETE APRON DETAILS
SCALE - N.T.S.



CURB RAMP TYPE 7 (LIMITED ROW)
(SEE NOTE 7)

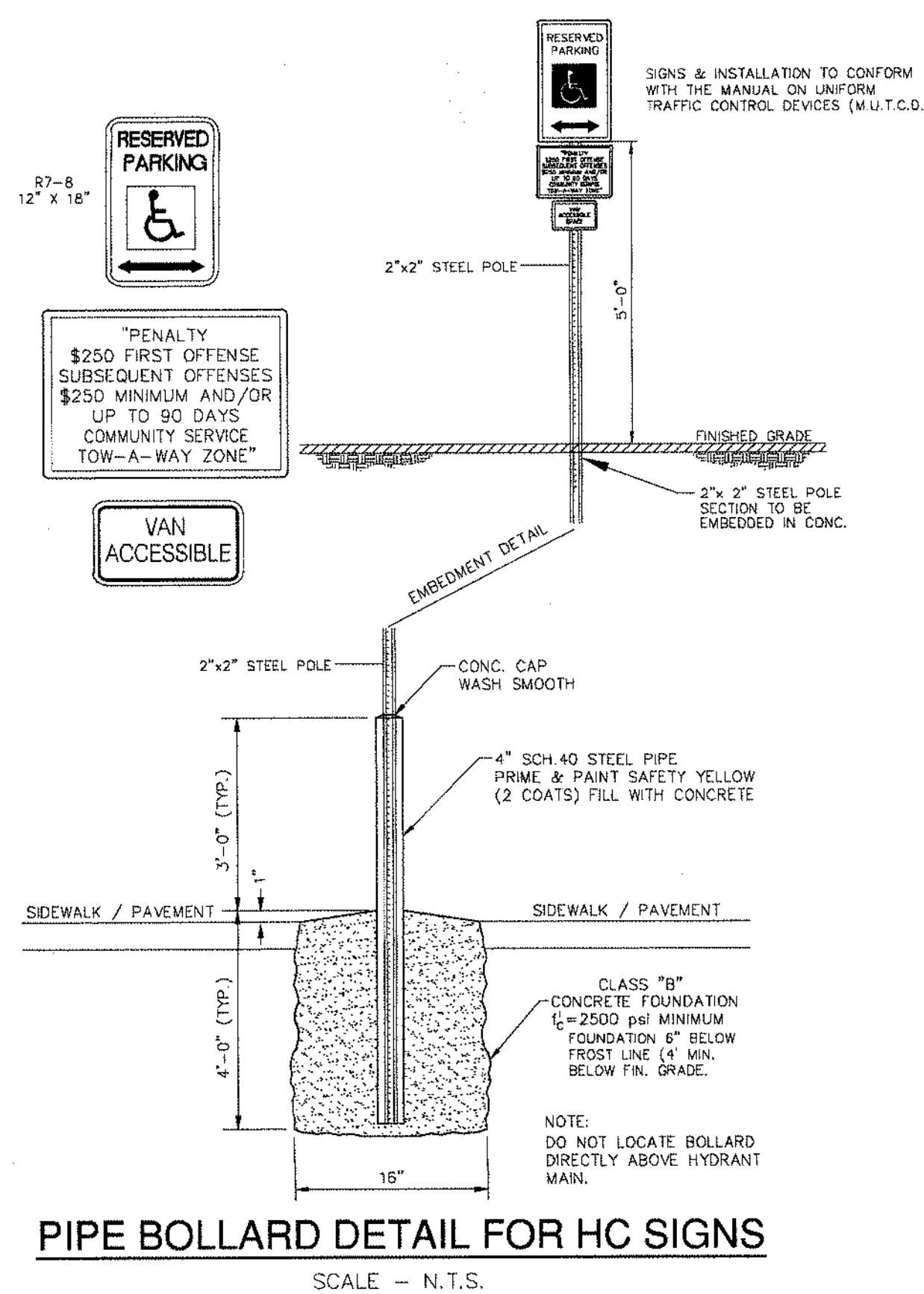
SECTION C-C

HANDICAP CURB RAMPS
SCALE - NOT TO SCALE

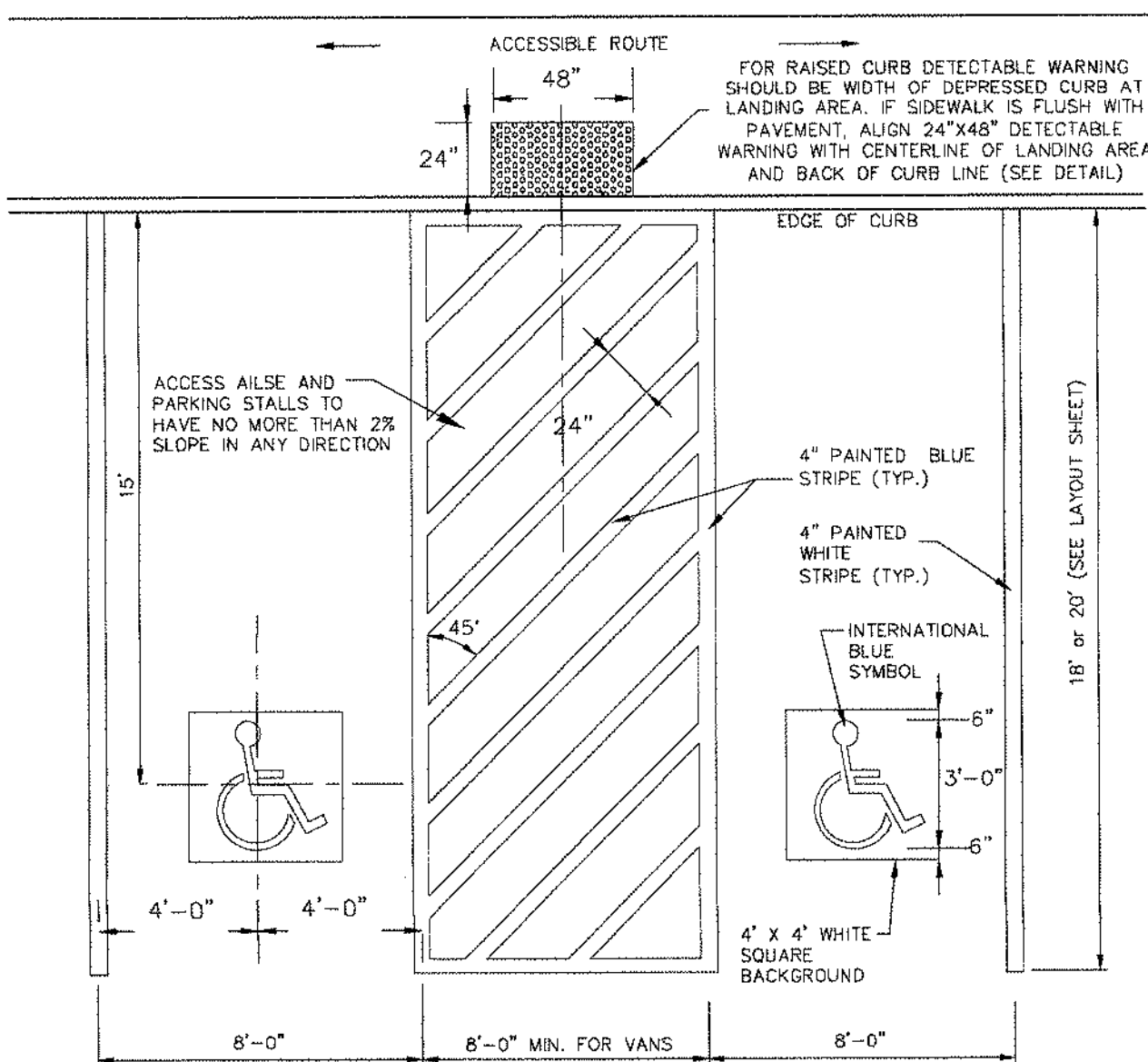
CURB RAMP TABLES
WARNING: DIMENSIONS SHOWN IN CURB RAMP TABLES ARE BASED ON A ZERO PERCENT GUTTER PROFILE. THEREFORE, DIMENSIONS SHOWN MAY INCREASE OR DECREASE BASED ON DIRECTION AND PERCENT OF GUTTER PROFILE.

CURB RAMP TYPE 1					CURB RAMP TYPE 2, 3 OR 6					CURB RAMP TYPE 7				
W	H	X1	L1	Y	W	H	X1	L1	Y	W	H	X1	L1	Y
FEET	INCHES	FEET	FEET	FEET	FEET	INCHES	FEET	FEET	FEET	FEET	INCHES	FEET	FEET	FEET
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4	3.5	10.6	4	4	4	4	4	4	4	4	4	4	4	4
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6	5.0	14.0	6	6	6	6	6	6	6	6	6	6	6	6
7	5.8	15.6	7	7	7	7	7	7	7	7	7	7	7	7
8	6.7	17.4	8	8	8	8	8	8	8	8	8	8	8	8
9	7.5	19.0	9	9	9	9	9	9	9	9	9	9	9	9
3.0	4	3.3	10.6	3.0	1	6	4	3.3	10.6	3.0	1	6	4	3.3
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6	5.8	15.6	6	6	4	12	7	5.8	15.6	6	6	4	12	7
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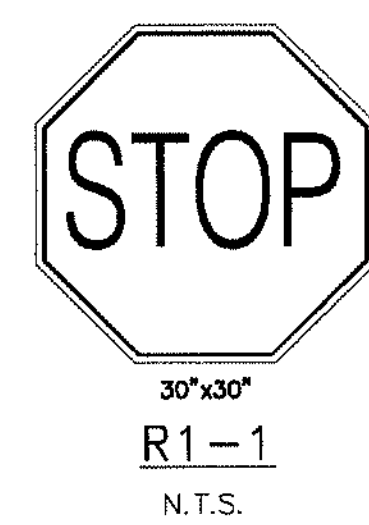
* TYPE 3 RAMP IS NOT APPLICABLE, USE TYPE 1. ** TYPE 4 RAMP IS NOT APPLICABLE, USE TYPE 2.



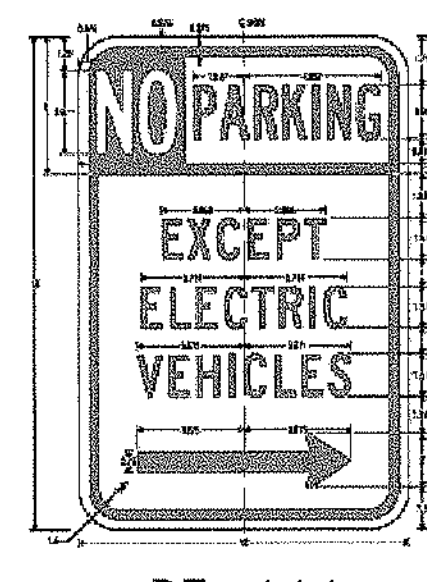
PIPE BOLLARD DETAIL FOR HC SIGNS
SCALE - N.T.S.



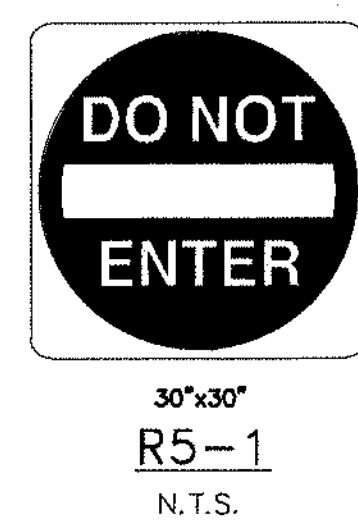
HANDICAP PARKING DIMENSIONS
SCALE - N.T.S.



R1-1
N.T.S.



R7-111



R5-1
N.T.S.

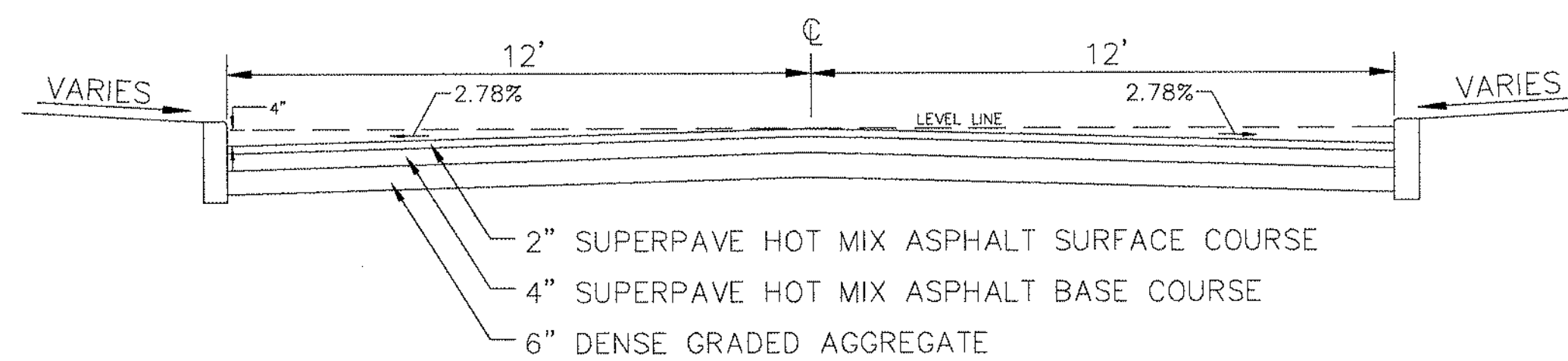


R6-1L
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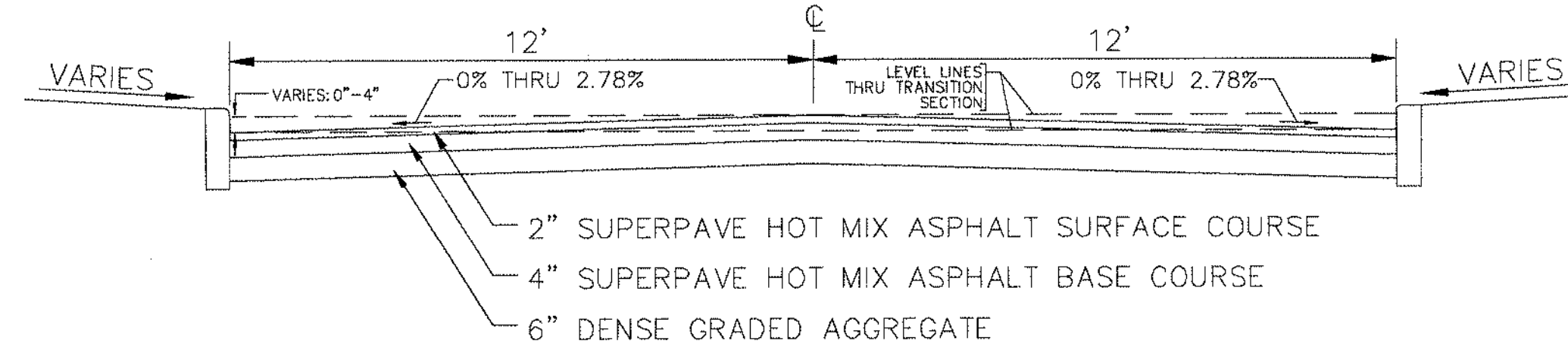


R6-1R
N.T.S.

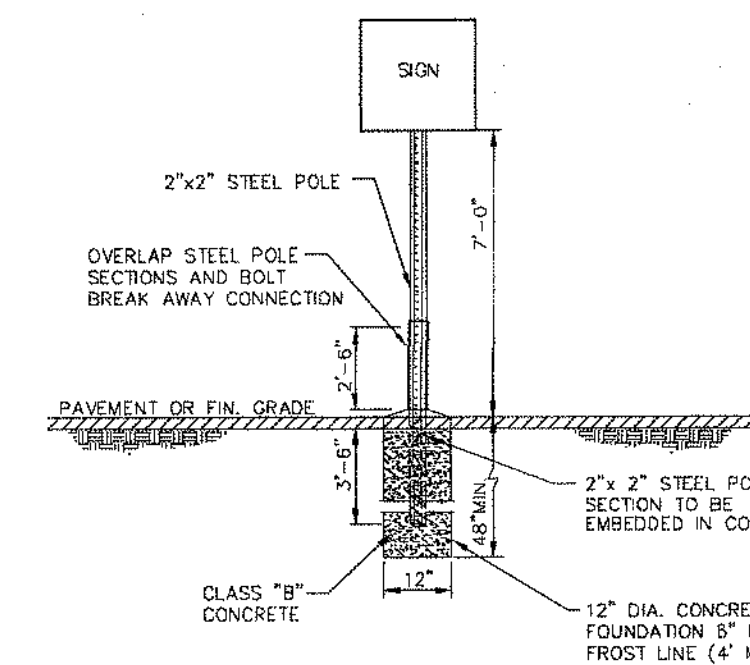
SIGNAGE DETAILS



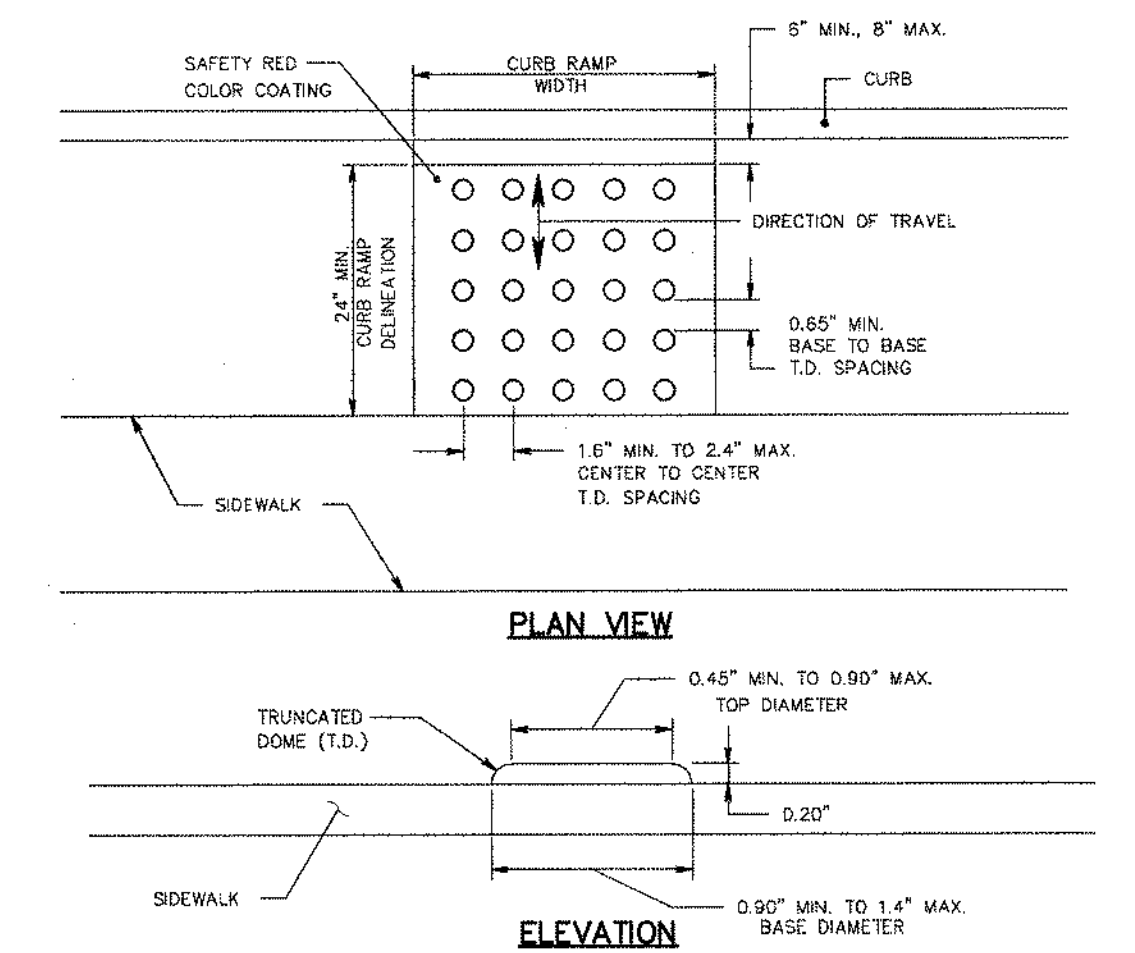
STANDARD CROSS SECTION DETAIL 'A' (NTS)
(STA. 22+67.54 THRU 25+76.30)



TRANSITION SECTION DETAIL (NTS)
(STA. 22+00 THRU 22+67.54)



STD. SIGN DETAIL
SCALE - N.T.S.

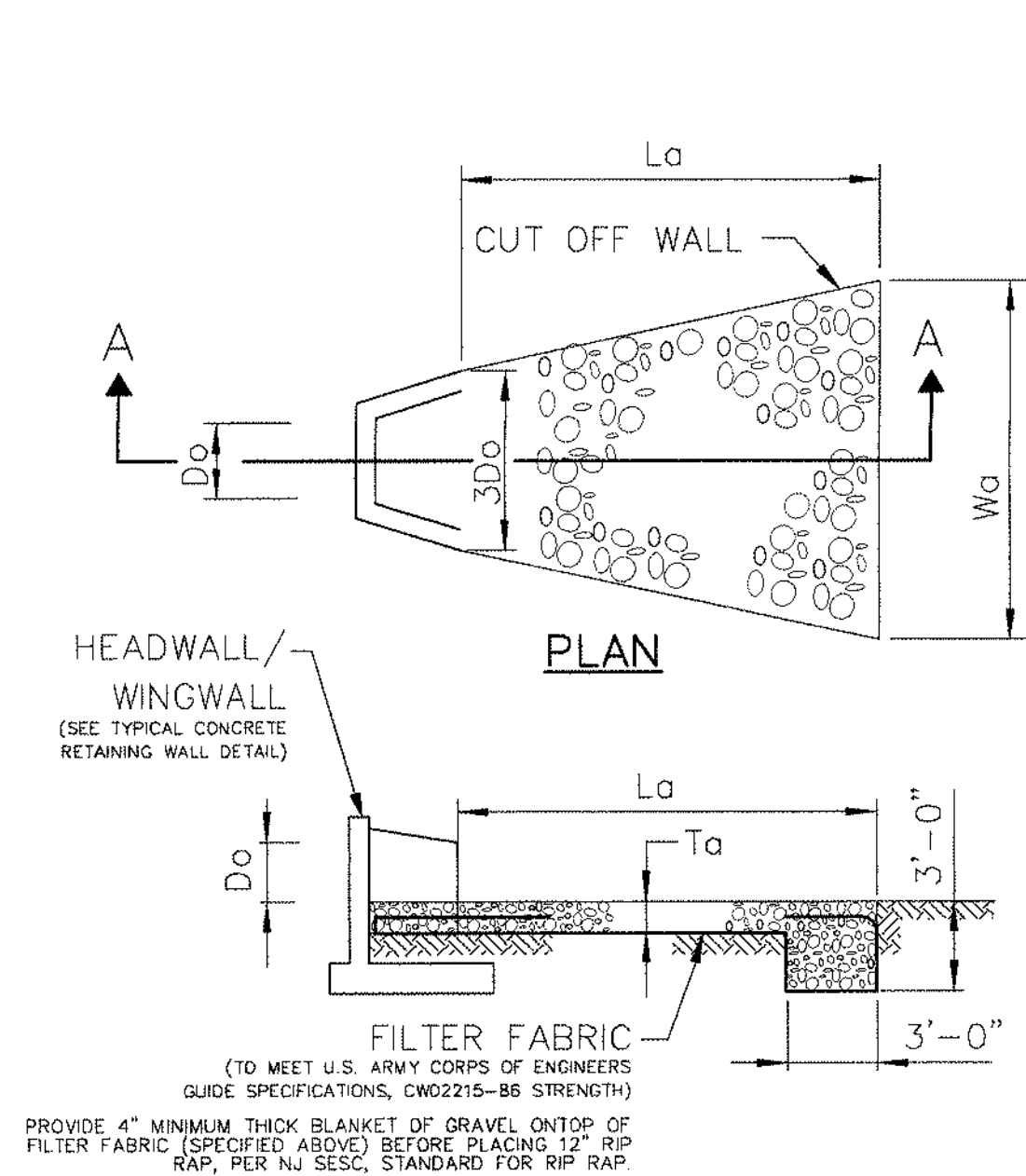


DETECTABLE WARNING SURFACE
SCALE - N.T.S.

REVISION	DESCRIPTION	DATE	BY
8	NO CHANGES	03/01/2023	JMP
7	ISSUED TO PLANNING BOARD	10/03/2022	JMP
6	REVISED PER NJDEP COMMENTS	05/06/2020	JMP
5	REVISED PER NJDEP COMMENTS	02/26/2020	JMP
4	MODIFIED BUILDING AND PARKING LAYOUT	10/05/2019	JMP
3	MODIFICATION TO BUILDING'S OWNER NJDEP SUBMITTAL DATA	08/29/2017	JMP
2	UPDATED FOR COMPLETENESS PER BOARD PROFESSIONALS	04/12/2017	JMP

PRELIMINARY AND FINAL SITE PLAN APPLICATION PREPARED FOR REDWOOD, L.L.C. 200 PLEASANT VALLEY WAY BLOCK 151 LOT 33 TOWNSHIP OF WEST ORANGE ESSEX COUNTY NEW JERSEY		
CONSTRUCTION DETAILS		
Designer: JMP	Checker: JMP	Project No: 16-0012
Draftsman: CLK/SPD	Scale: AS NOTED	Sheet: SP-13
J. MICHAEL PETRY-PE, PP, RA NO PROFESSIONAL ENGINEER LIC. NO. 98895 DATED: 12/10/16		

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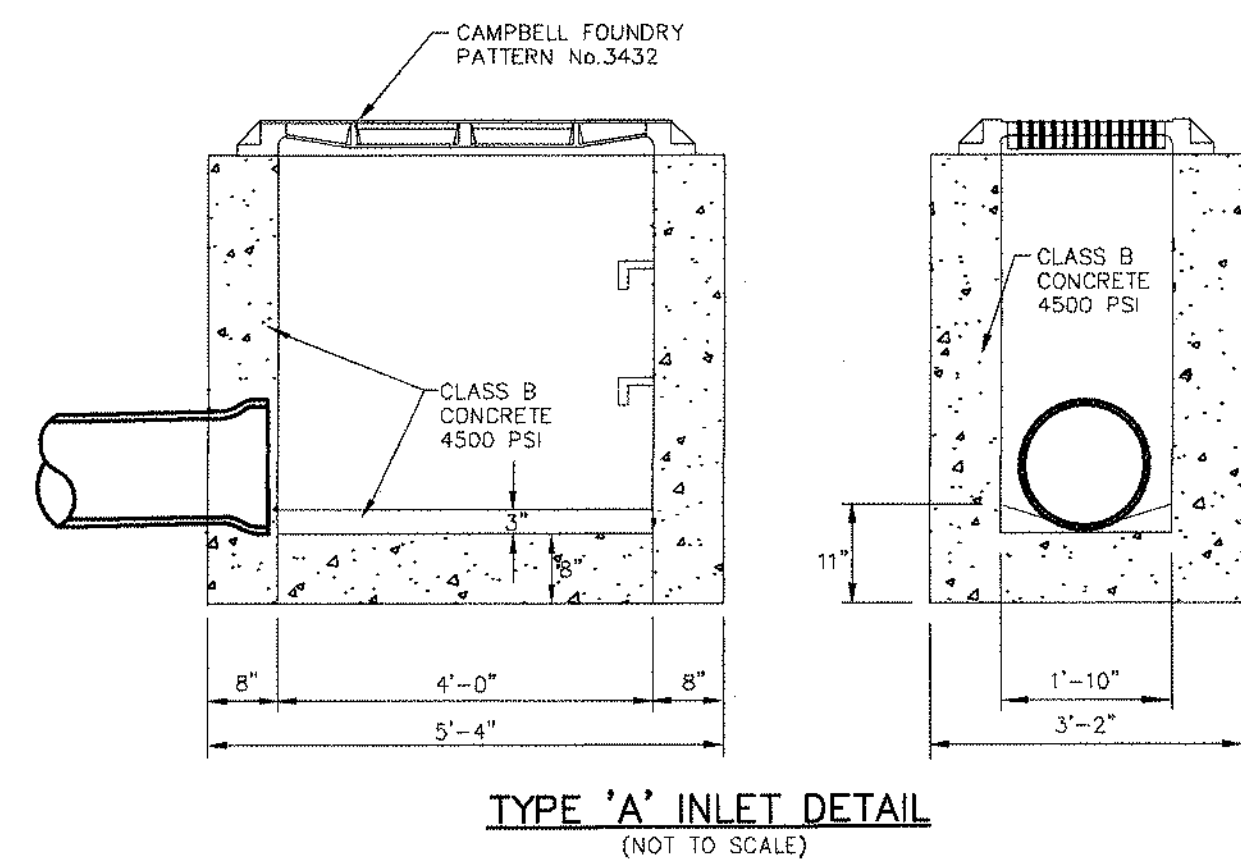
SECTION A-A

RIP RAP APRON DETAIL

SCALE N.T.S.

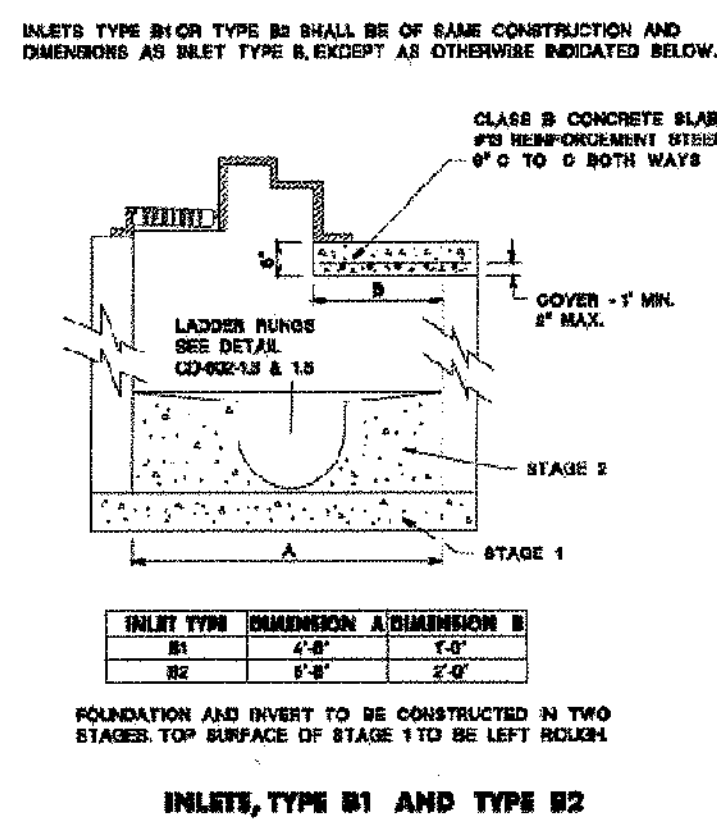
OUTLET PROTECTION SCHEDULE
(FOR RIP RAP APRON)

OUTFALL #	Do	3Do	La	Wa	d50	Ta
1	24"	72"	20'	16'	12"	24"
2	15"	45"	20'	24'	12"	24"
3	15"	45"	7.5'	7'	12"	24"
4	15"	45"	7.5'	7'	12"	24"



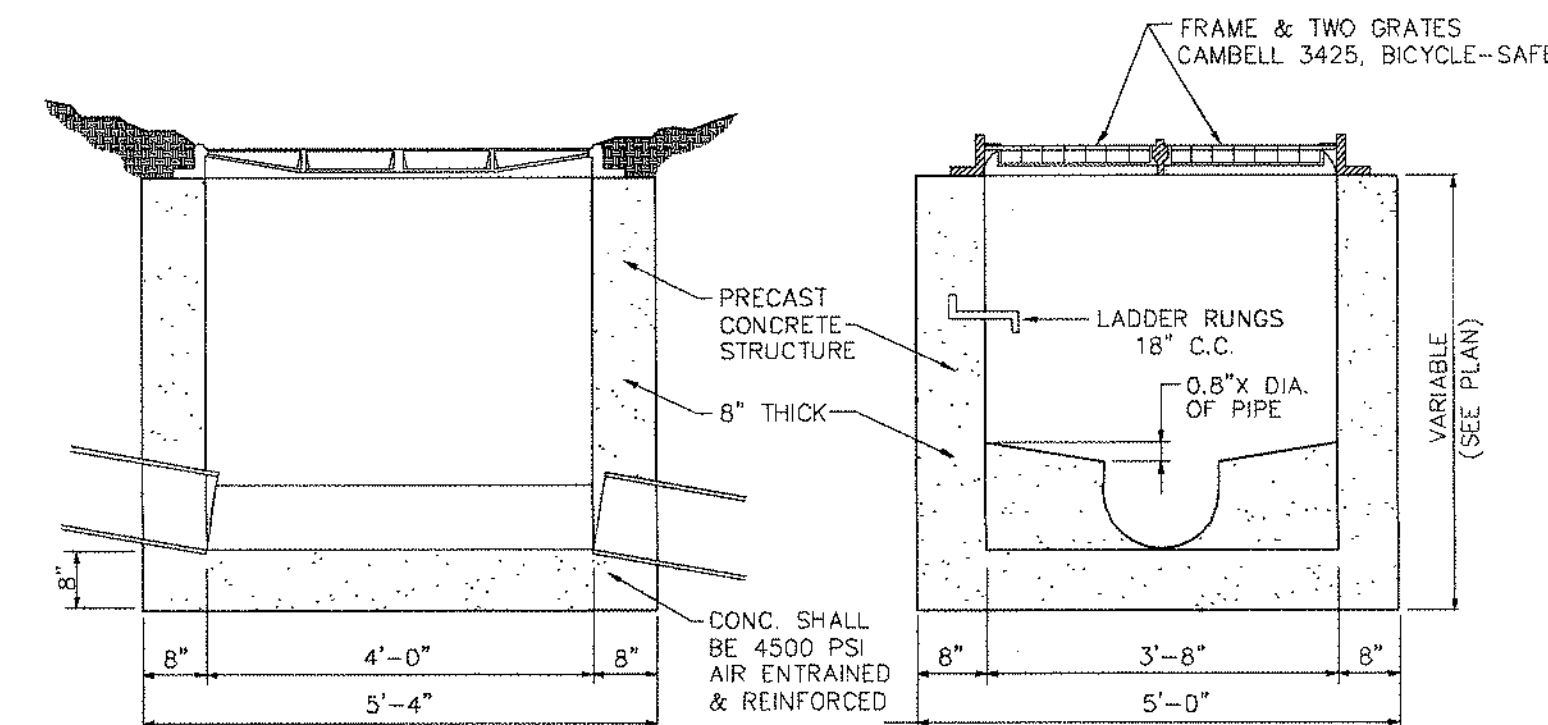
TYPE 'A' INLET DETAIL

(NOT TO SCALE)



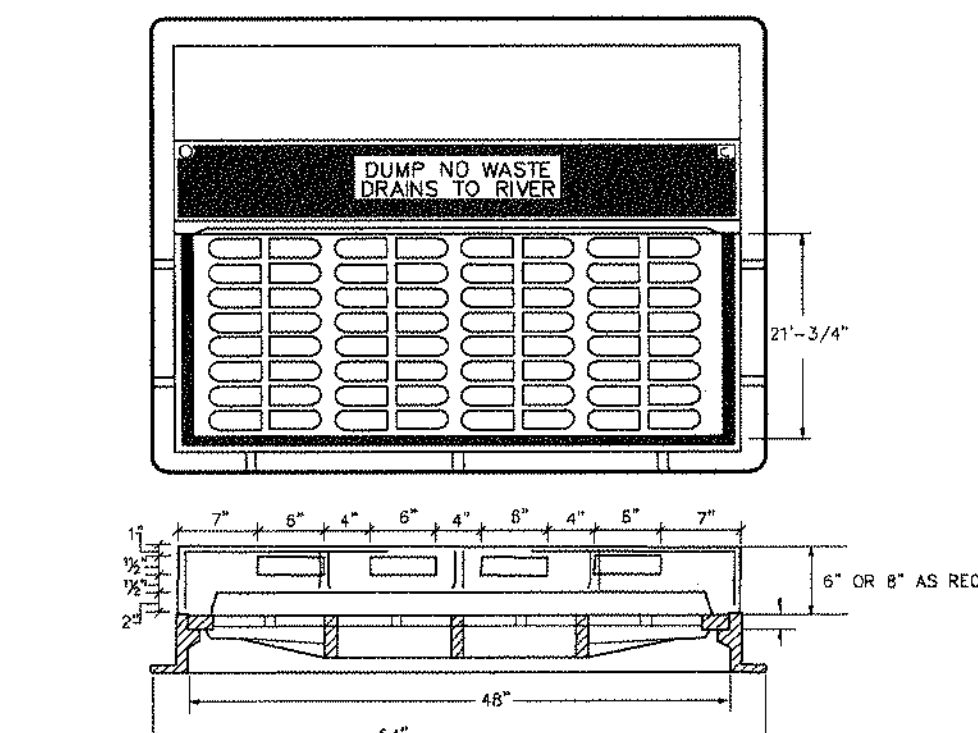
TYPE 'B-2' INLET DETAIL

SCALE N.T.S.



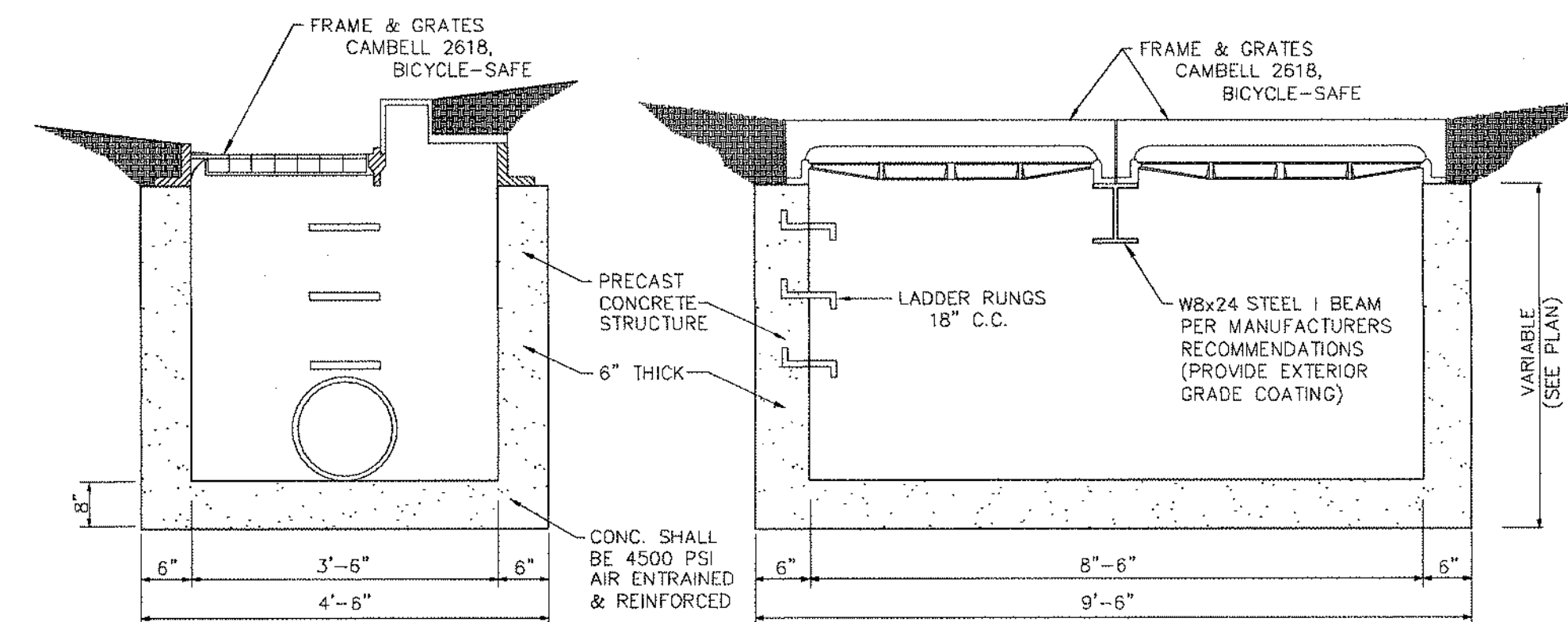
TYPE 'E' INLET DETAIL

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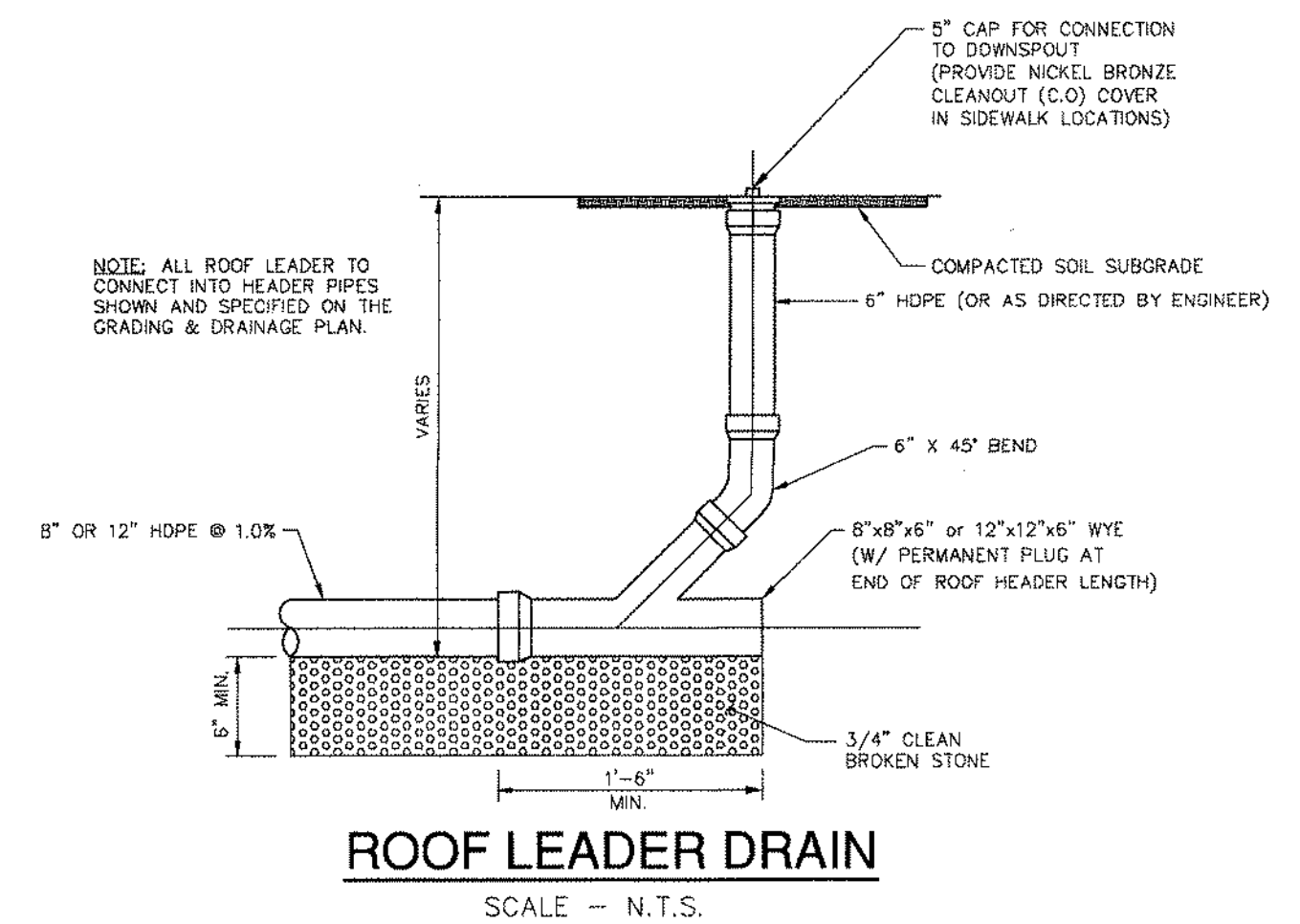
CURB INLET GRATE
AND TYPE 'N' ECO CURB PIECE

N.T.S.



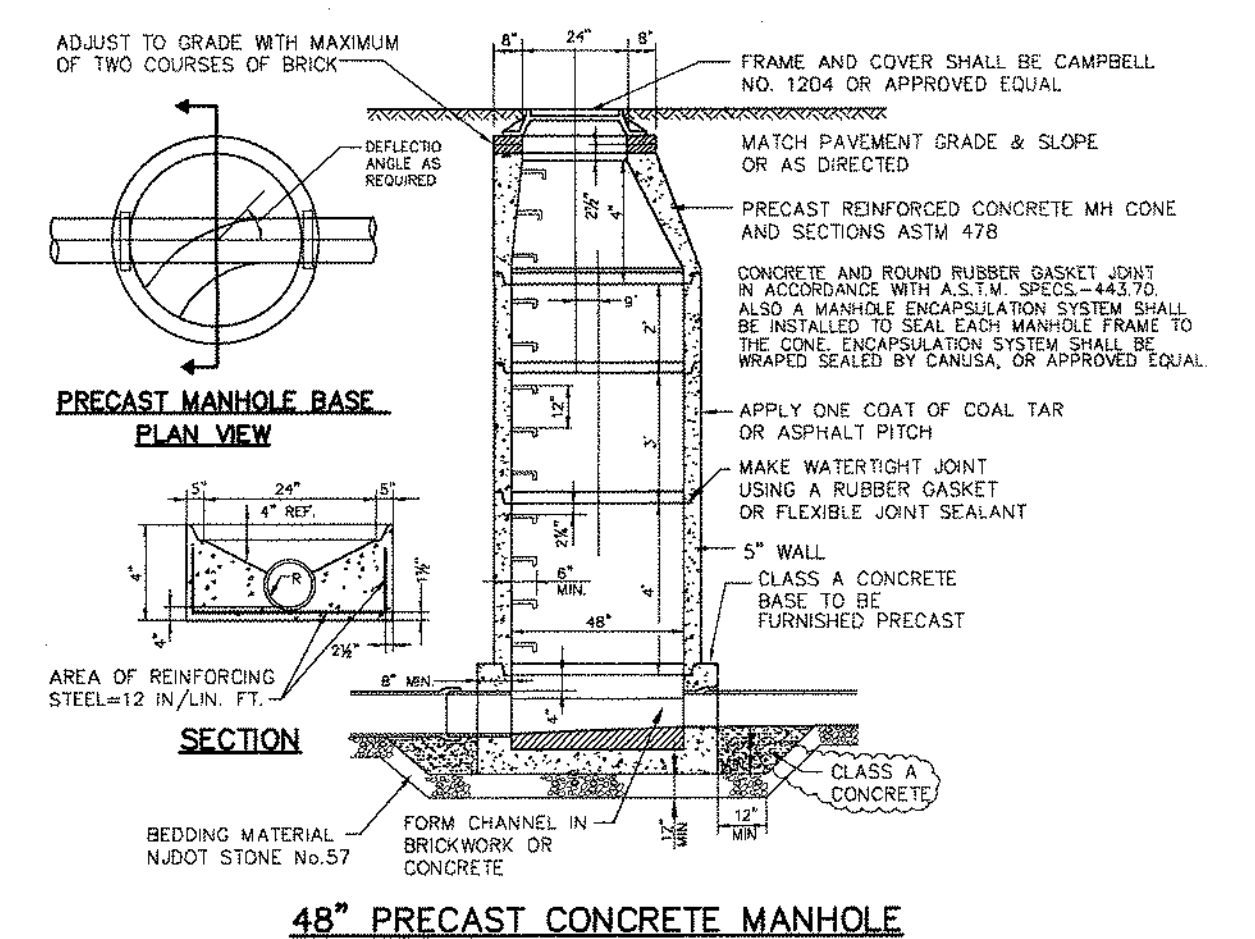
DOUBLE TYPE 'B' INLET DETAIL

SCALE N.T.S.

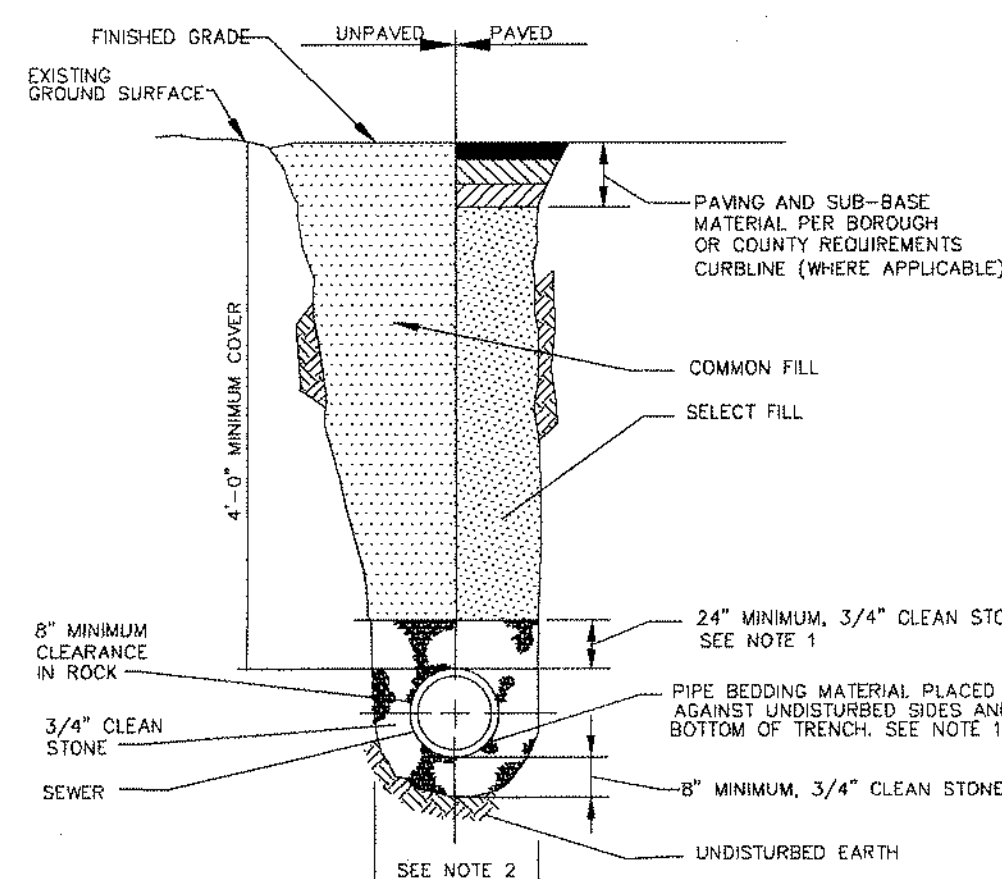


ROOF LEADER DRAIN

SCALE - N.T.S.

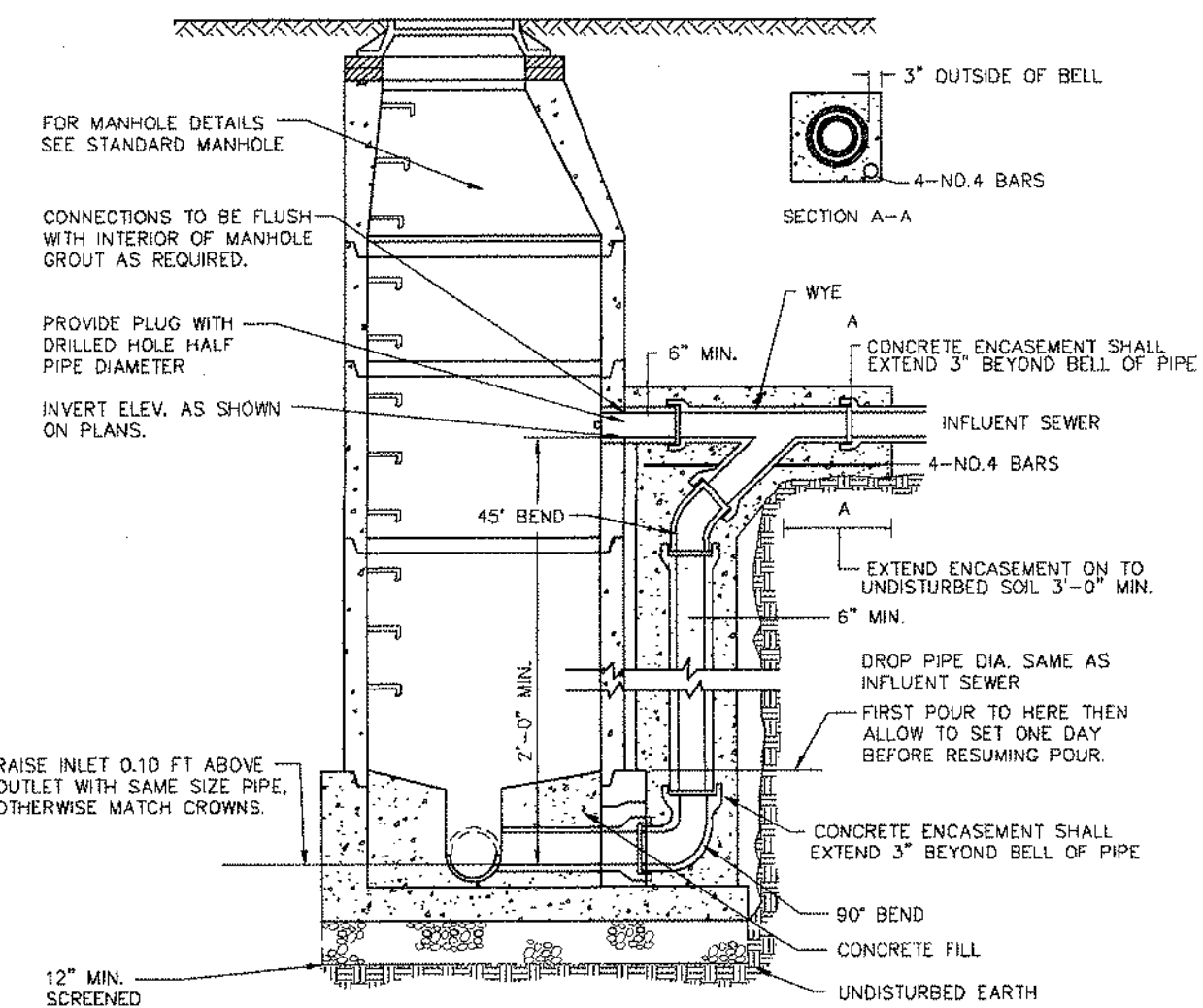


48" PRECAST CONCRETE MANHOLE



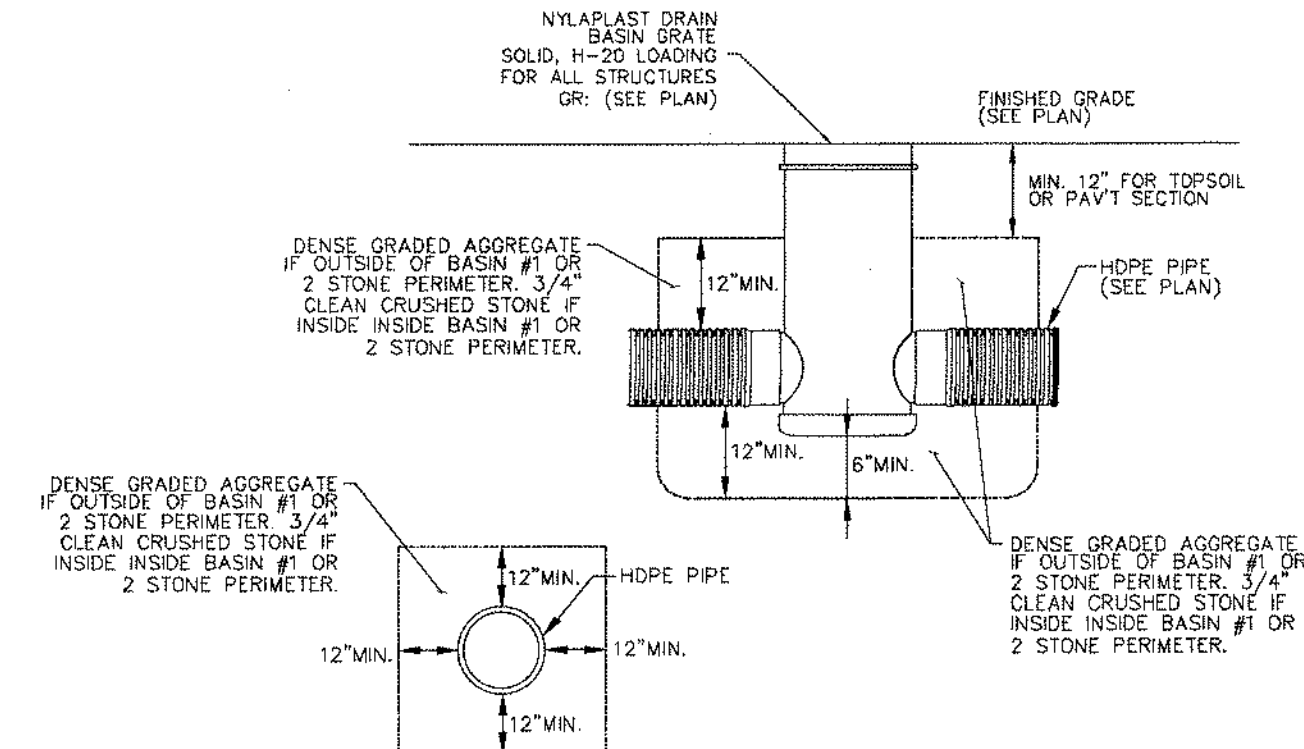
TYPICAL TRENCH DETAIL FOR
8" PVC SDR-35 SEWER PIPE

SCALE - N.T.S.



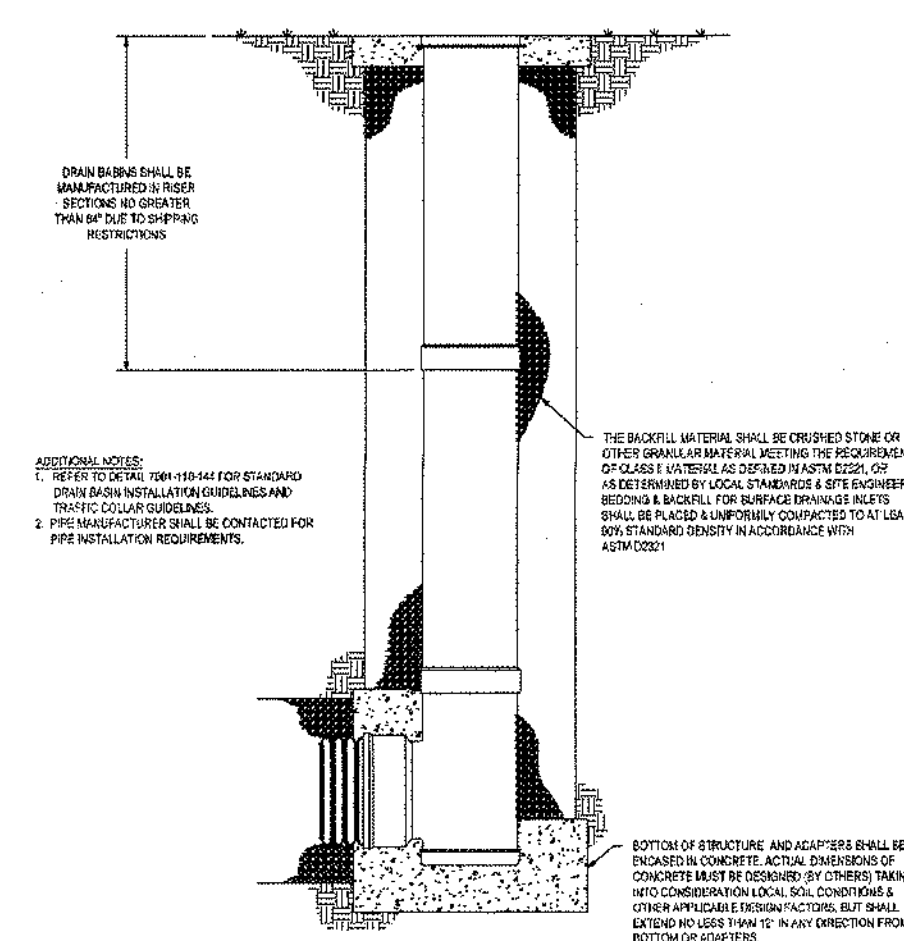
SANITARY SEWER DROP MANHOLE DETAIL

SCALE - NOT TO SCALE



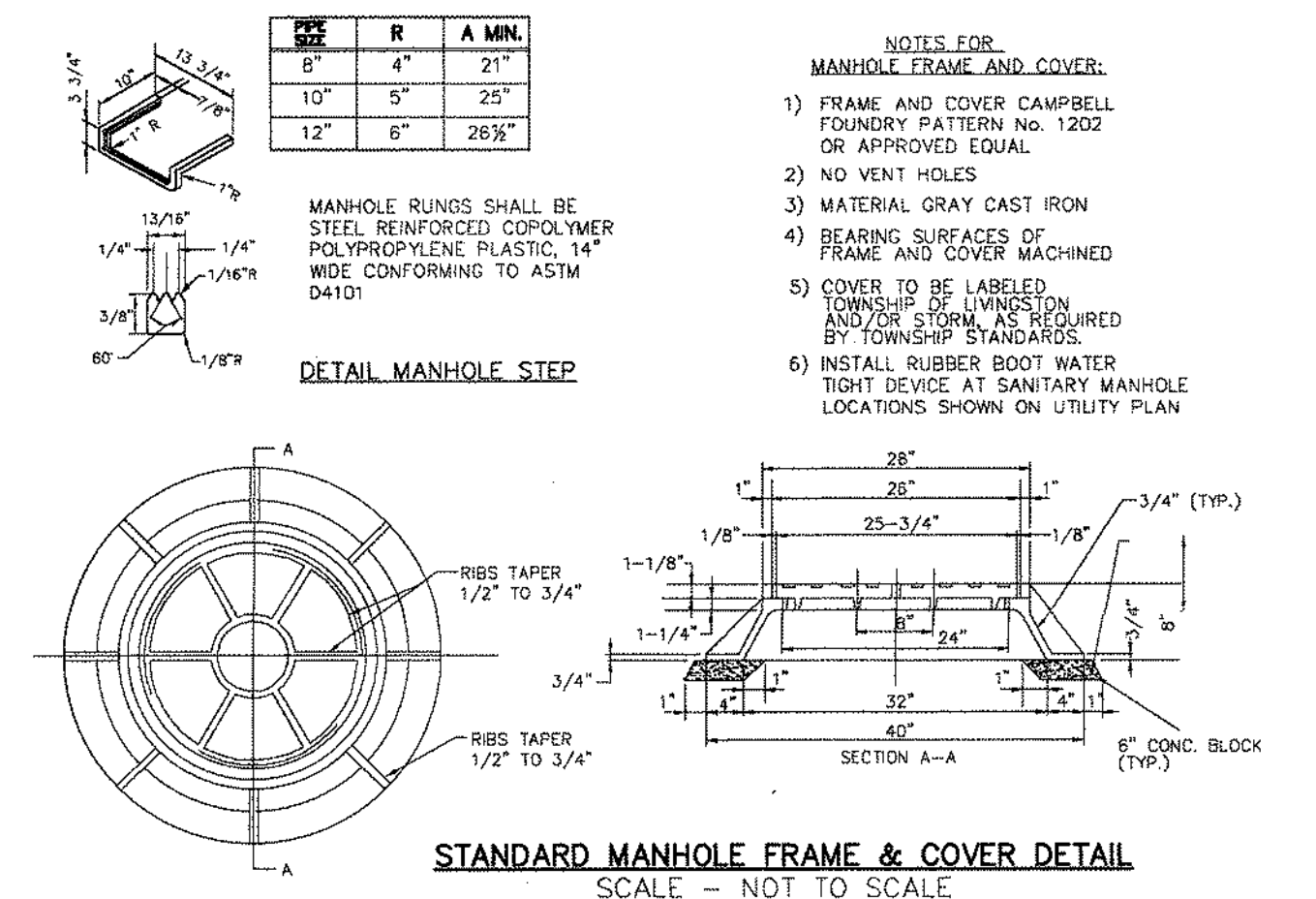
NY OPLAST DRAIN
BASIN DETAIL

SCALE N.T.S.



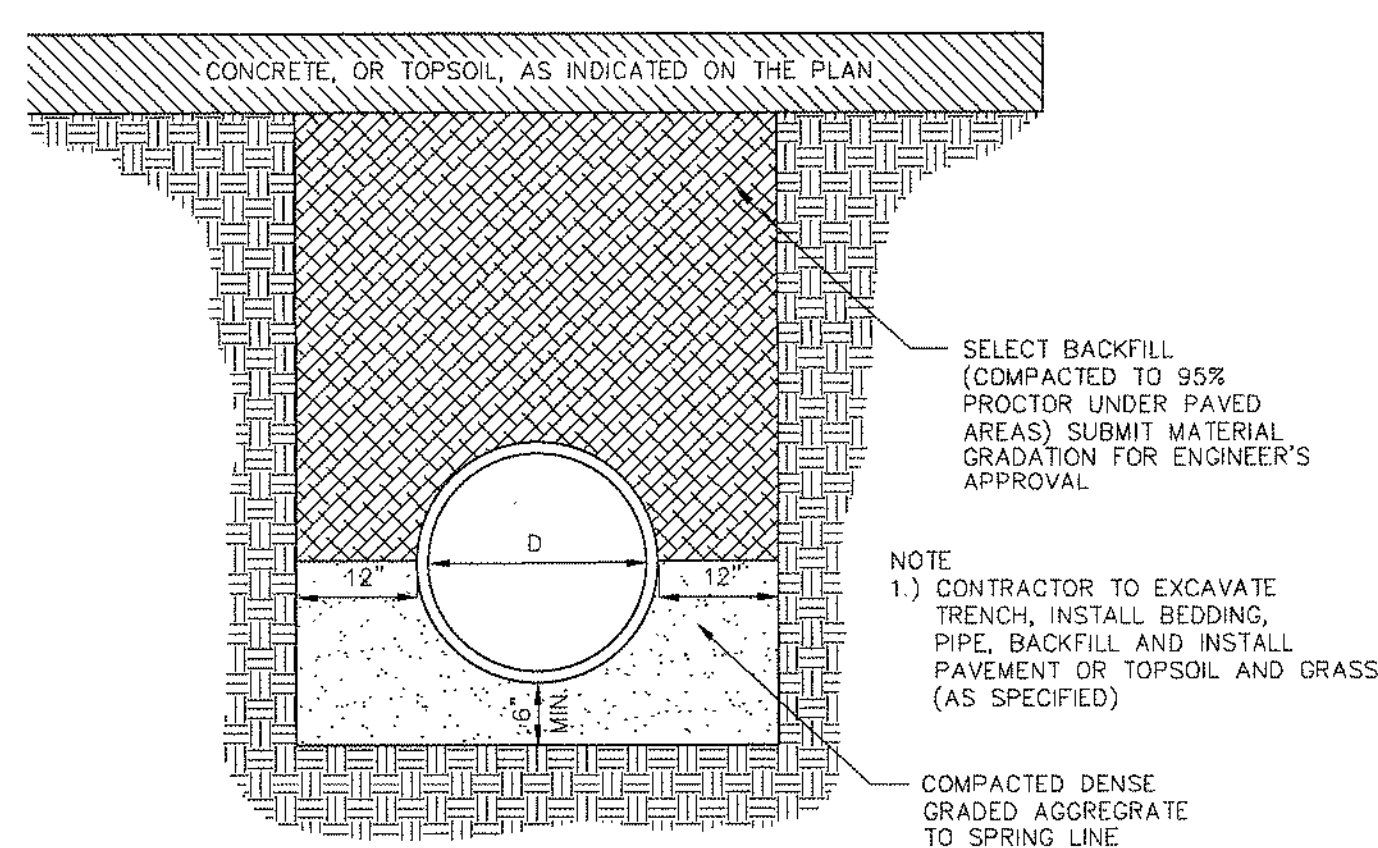
DEEP BURIAL INSTALLATION DETAIL

SCALE N.T.S.



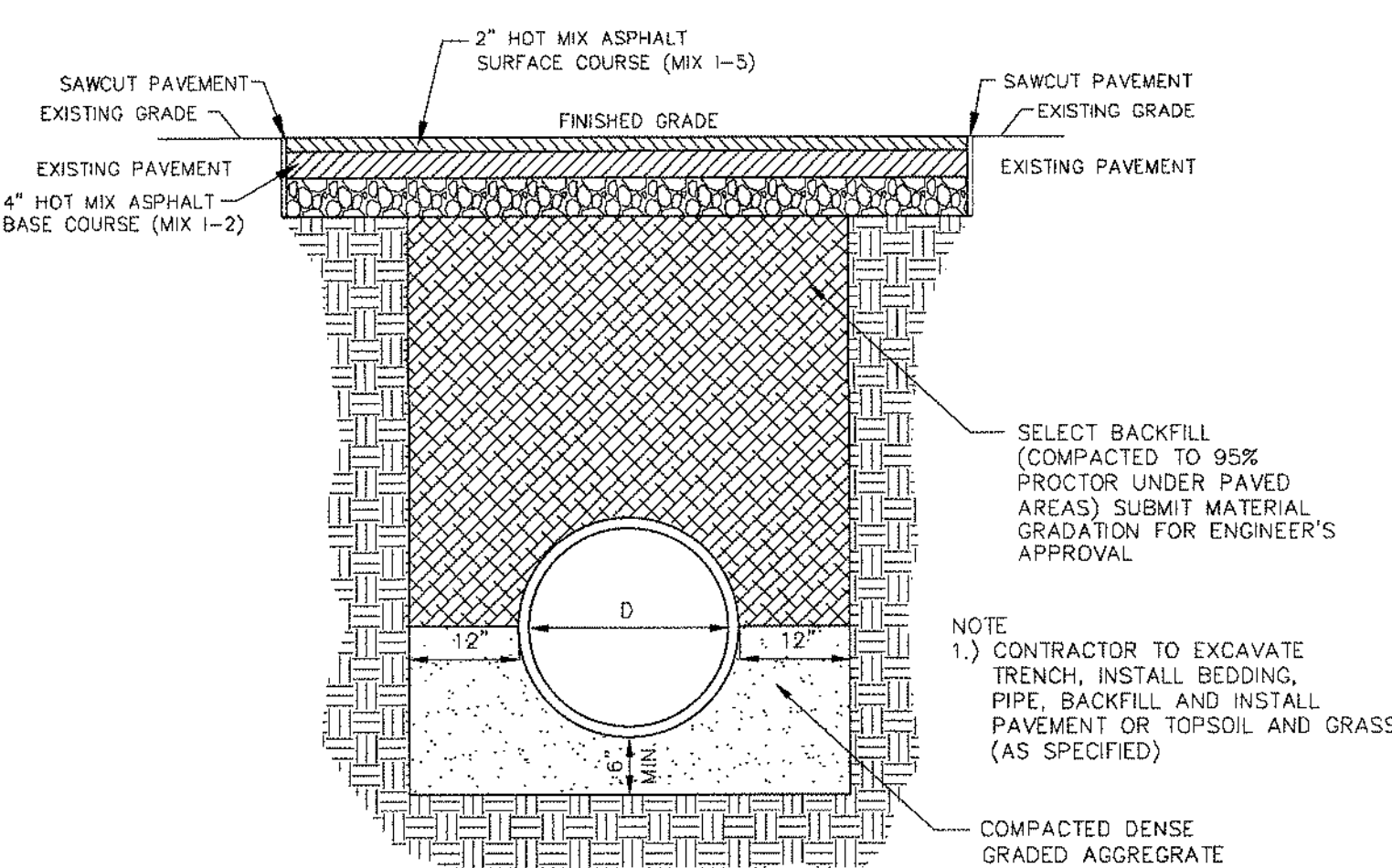
STANDARD MANHOLE FRAME & COVER DETAIL

SCALE - NOT TO SCALE



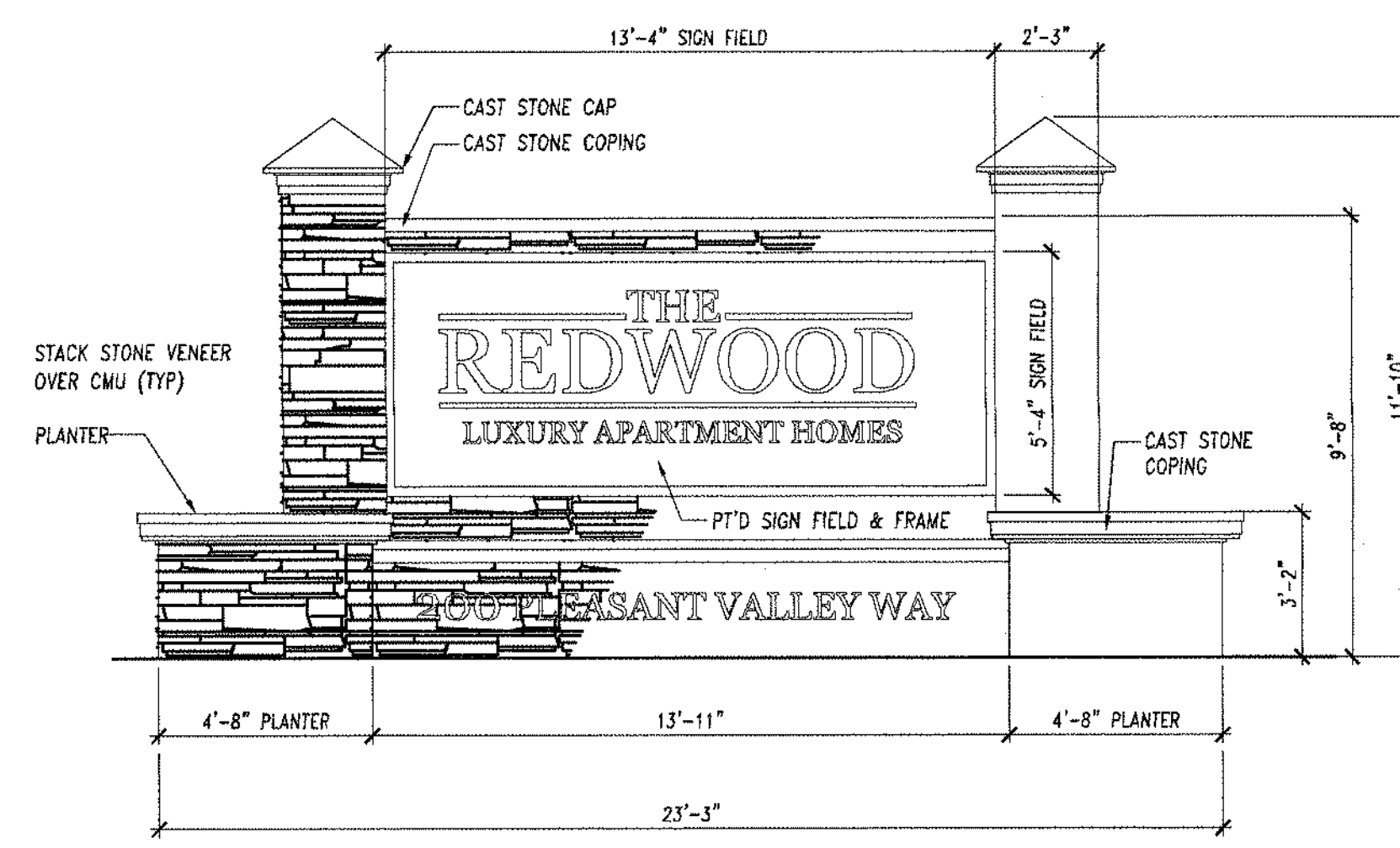
PIPE TRENCH DETAIL

N.T.S.



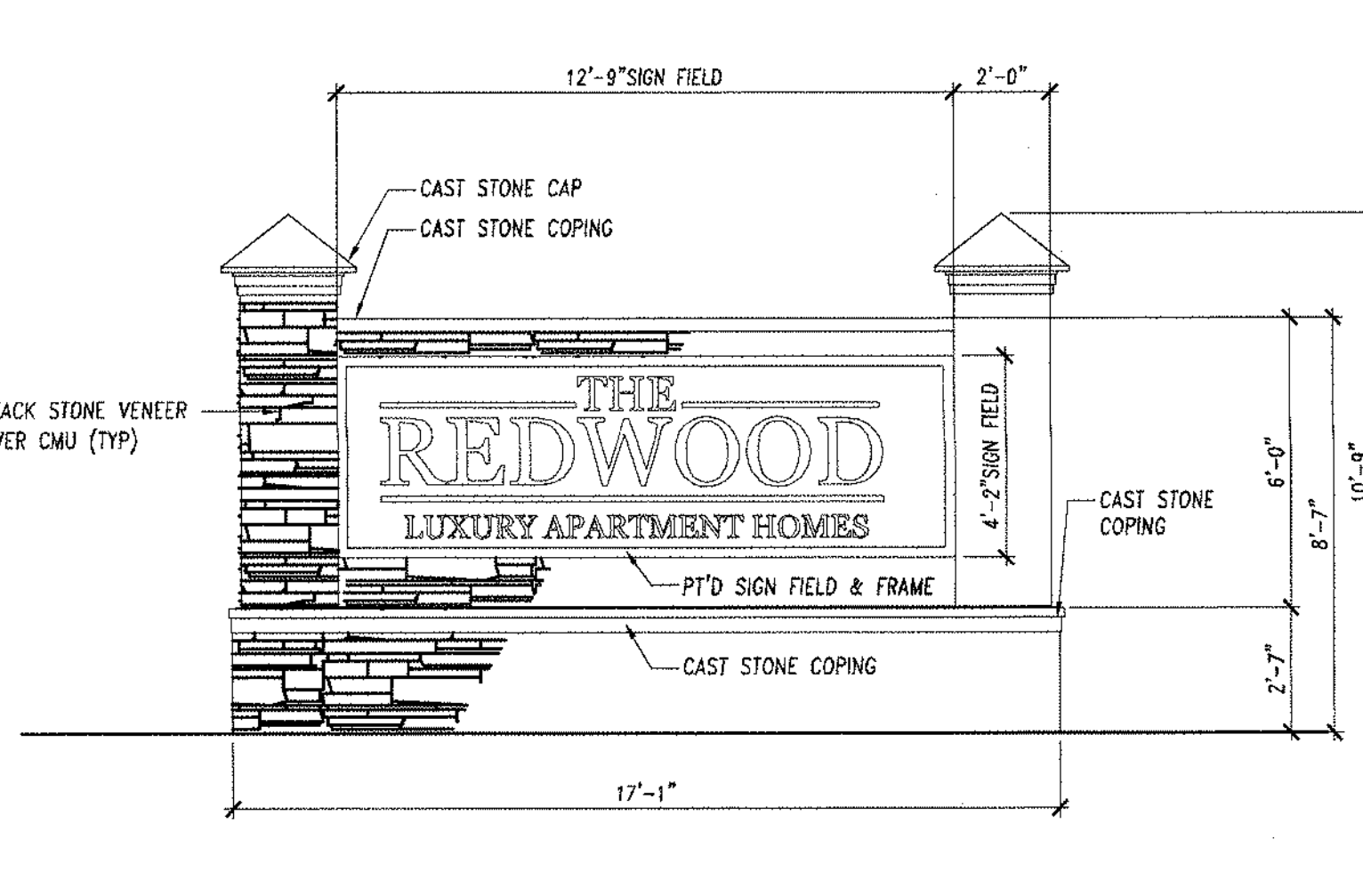
PIPE TRENCH AND REPAVING DETAIL
ALONG PARKING AND DRIVEWAY AREAS

N.T.S.



PLEASANT VALLEY WAY SIGN DETAIL

(NOT TO SCALE)



INTERIOR DRIVEWAY SIGN DETAIL

(NOT TO SCALE)

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8	NO CHANGES	09/01/2023	JMP
7	ISSUED TO PLANNING BOARD	10/05/2022	JMP
6	REVISED PER NJDEP COMMENTS	05/09/2020	JMP
5	REVISED PER NJDEP COMMENTS	02/29/2020	JMP
4	MODIFIED BUILDING AND PARKING LAYOUT	10/09/2019	JMP
2	MODIFICATION TO BUILDING SITE GRADES NJDEP SUBMITTAL DATA	09/29/2017	JMP
1	UPDATED FOR COMPLETENESS PER BOARD PROFESSIONALS	04/12/2017	JMP
REVISION	DESCRIPTION	DATE	BY

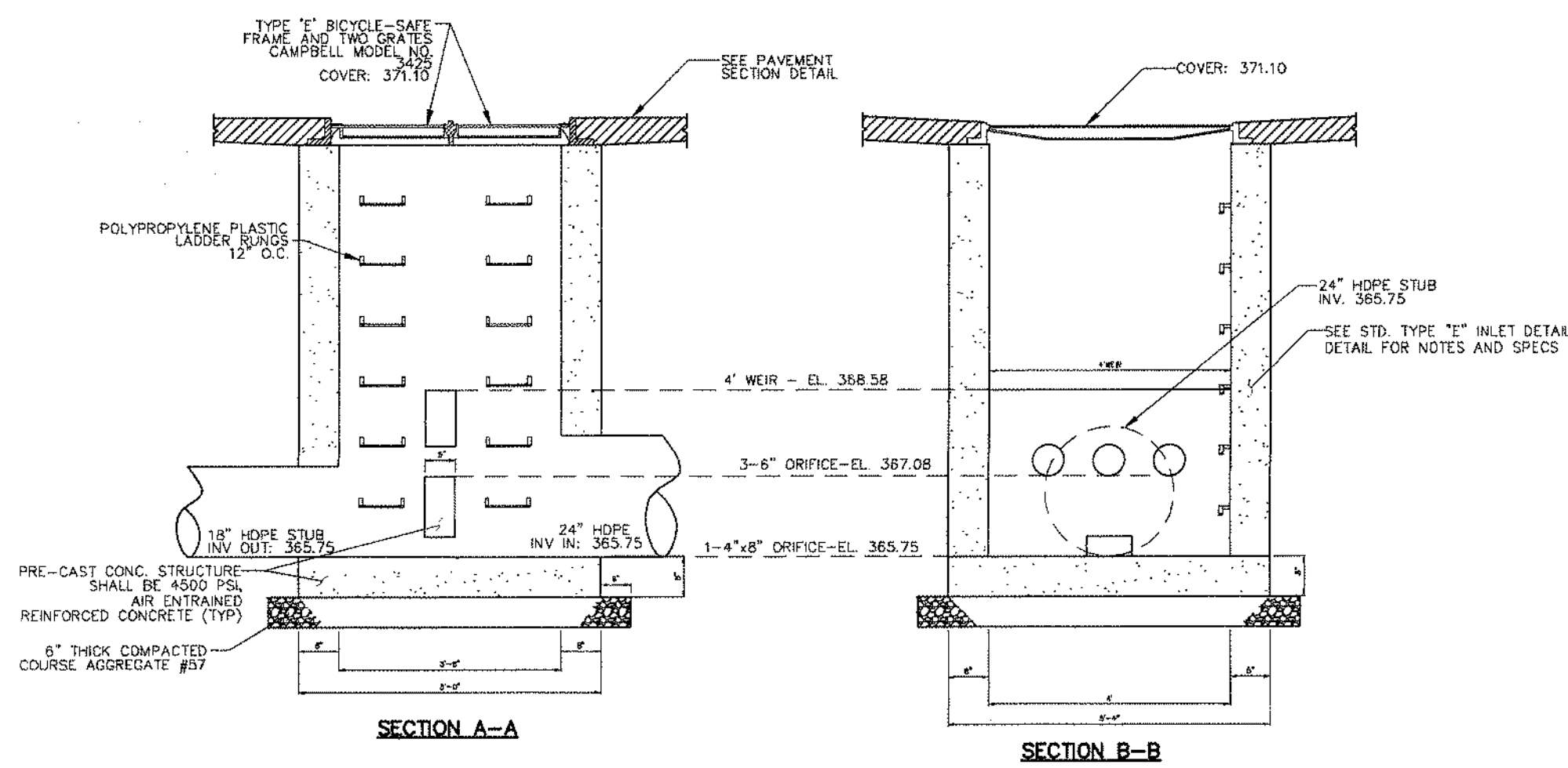
PRELIMINARY AND FINAL SITE PLAN APPLICATION
PREPARED FOR
REDWOOD, L.L.C.
200 PLEASANT VALLEY WAY
BLOCK 151 LOT 33
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY NEW JERSEY

CONSTRUCTION DETAILS

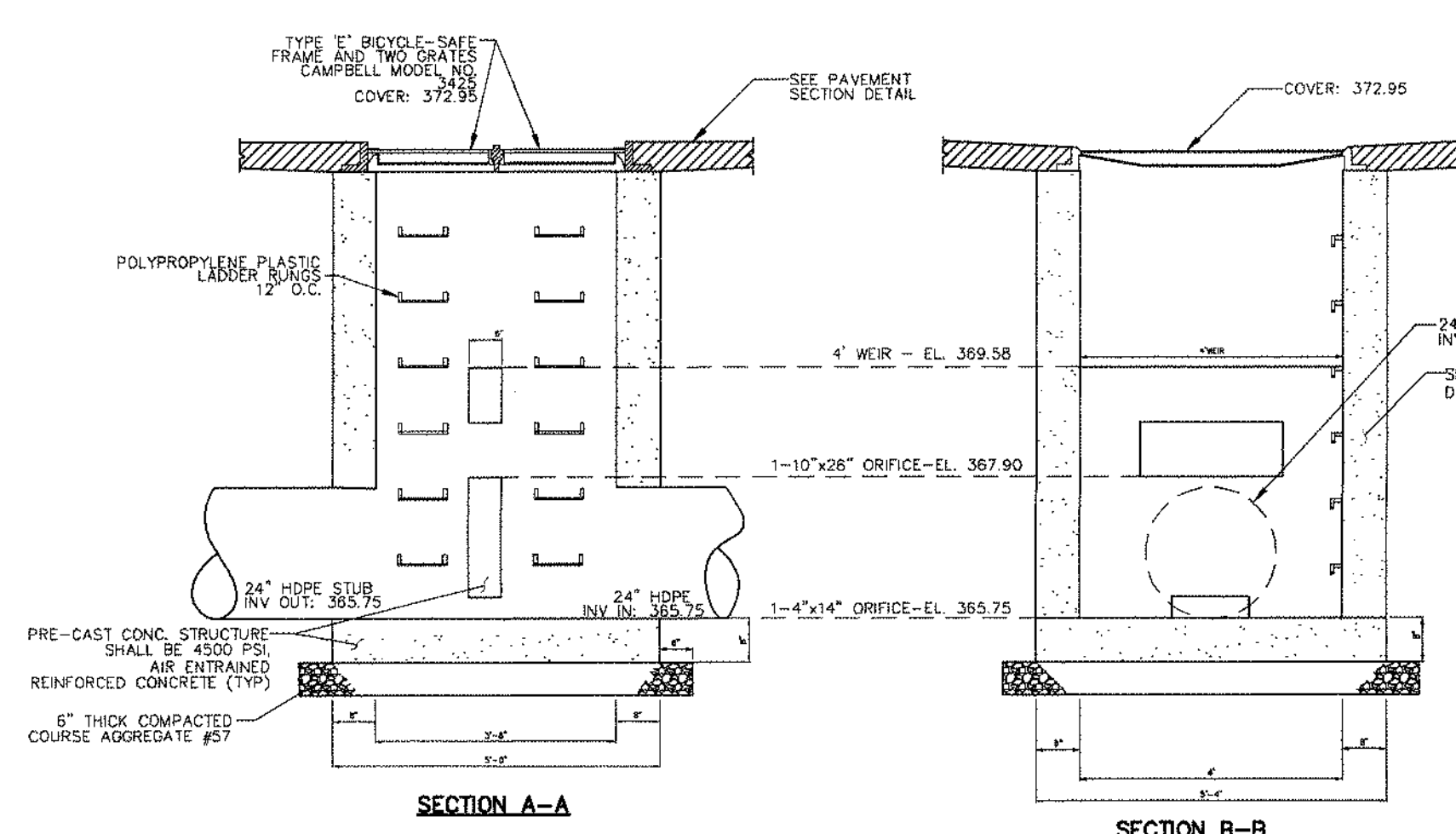
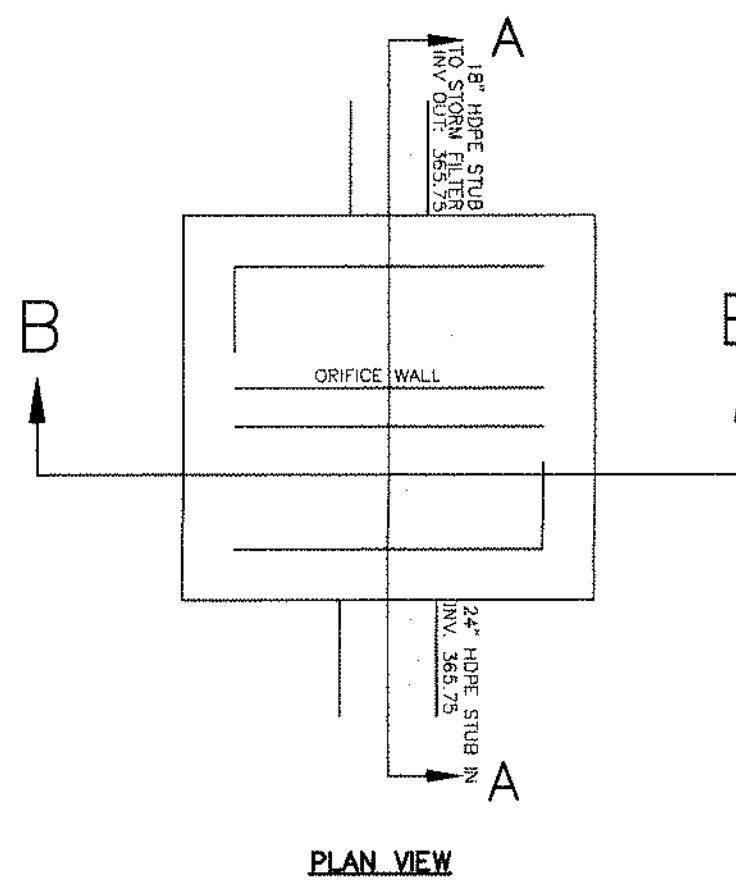
PETRY
ENGINEERING, LLC
A PROFESSIONAL ENGINEERING FIRM
200 PLEASANT VALLEY WAY
BLOCK 151 LOT 33
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY NEW JERSEY
TEL: 973-227-7900 FAX: 973-227-1076

J. MICHAEL PETRY-PE, PP, RA
NJ PROFESSIONAL ENGINEER, LICENSE NO. 36922
DATE: 12/12/16

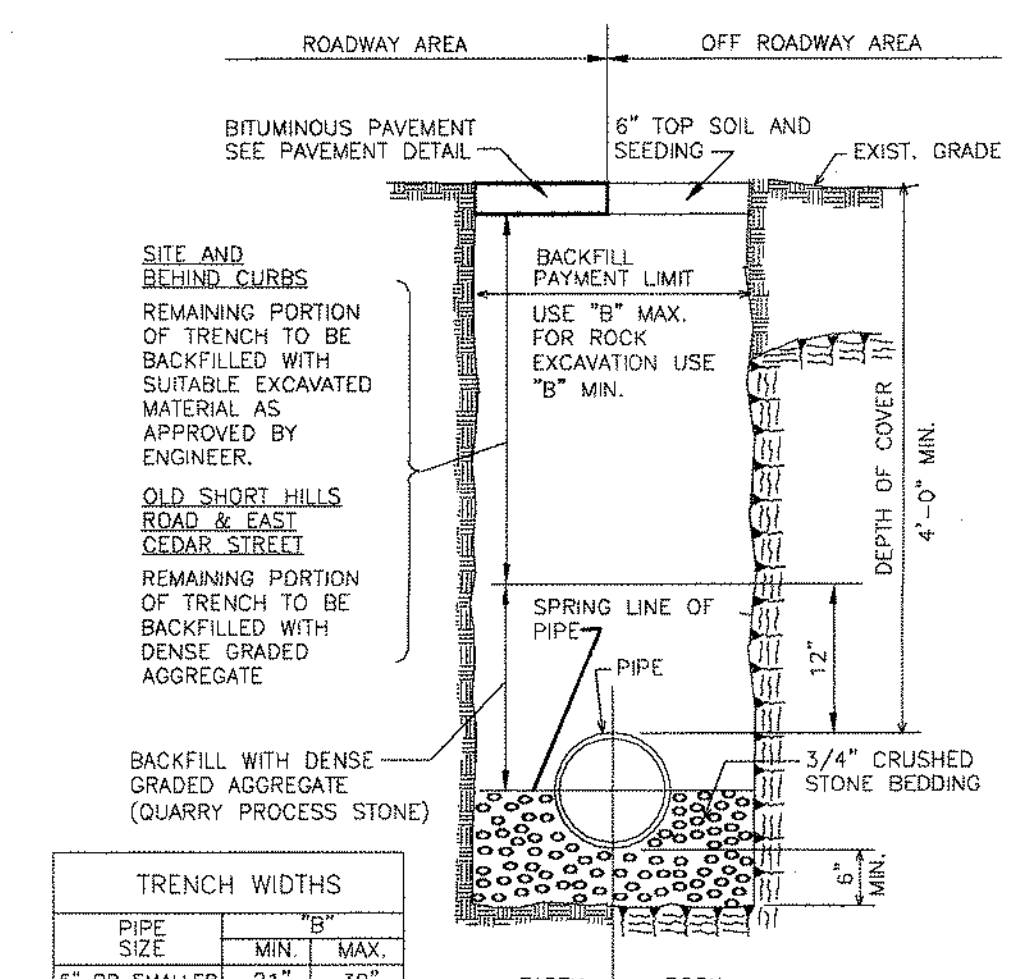
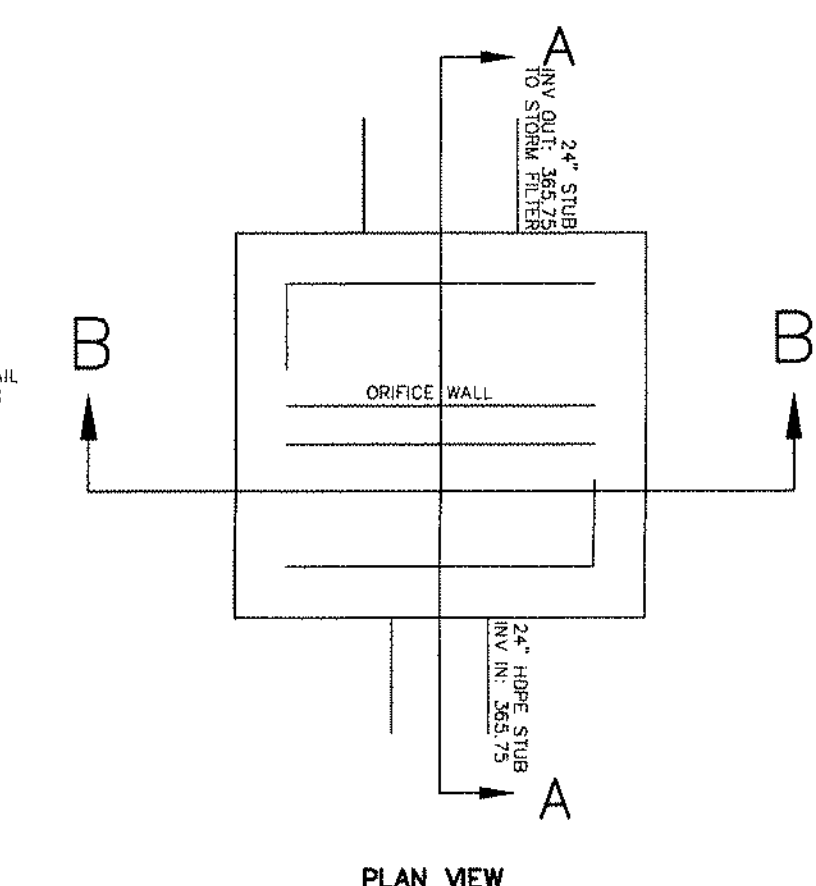
Designer: JMP
Draftsman: CLK/SPD
Checked By: JMP
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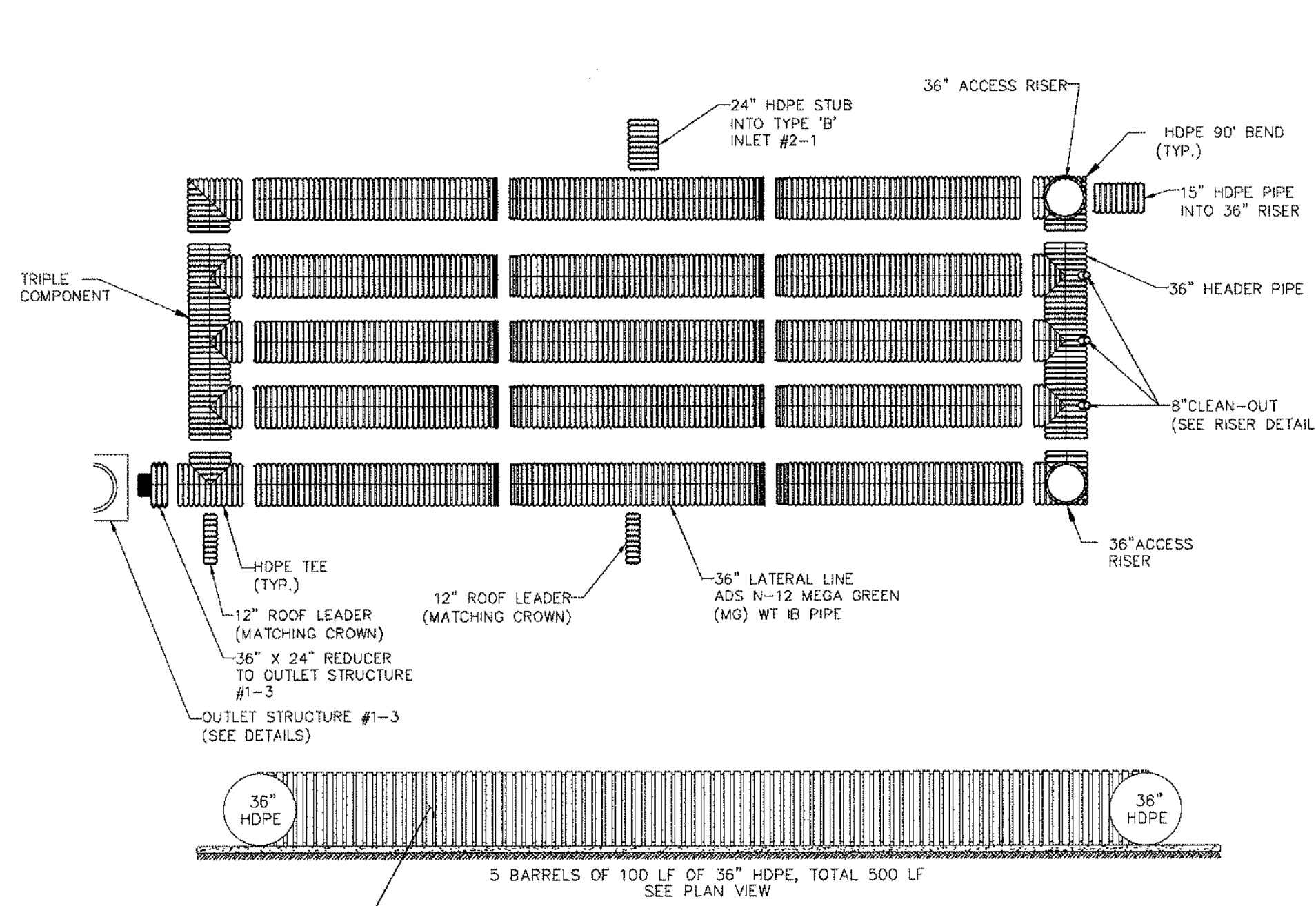
OUTLET STRUCTURE #1-3 DETAIL
SCALE N.T.S.



OUTLET STRUCTURE #4-1 DETAIL
SCALE N.T.S.

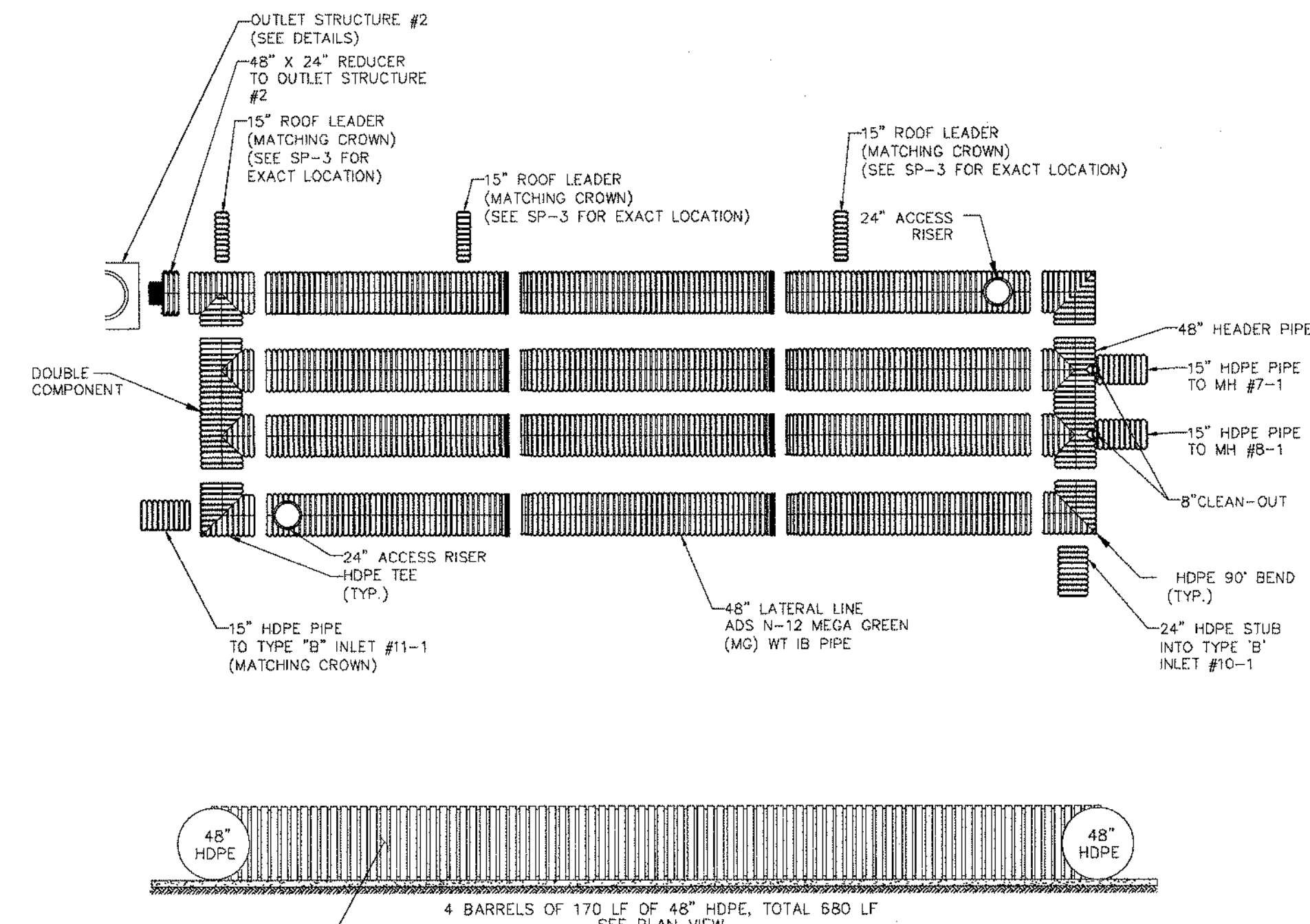


TRENCH DETAILS
SCALE - N.T.S.

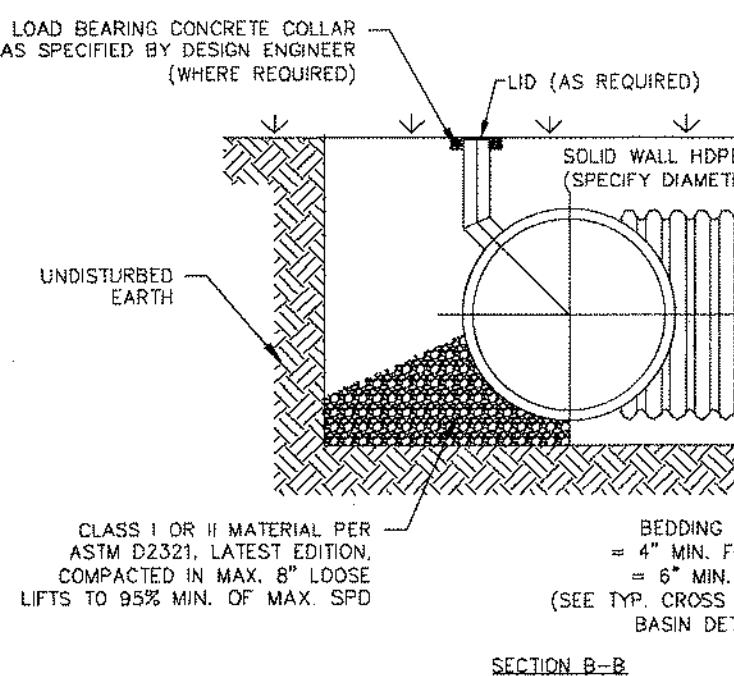
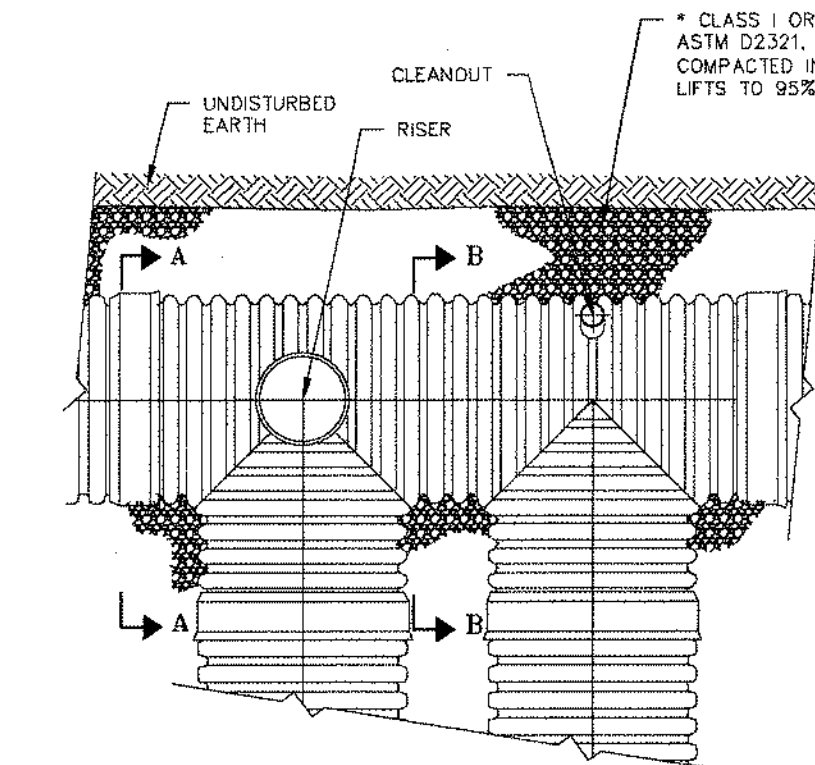


TYPICAL PLAN & ELEVATION VIEW OF SUBSURFACE DETENTION BASIN #1
SCALE N.T.S.

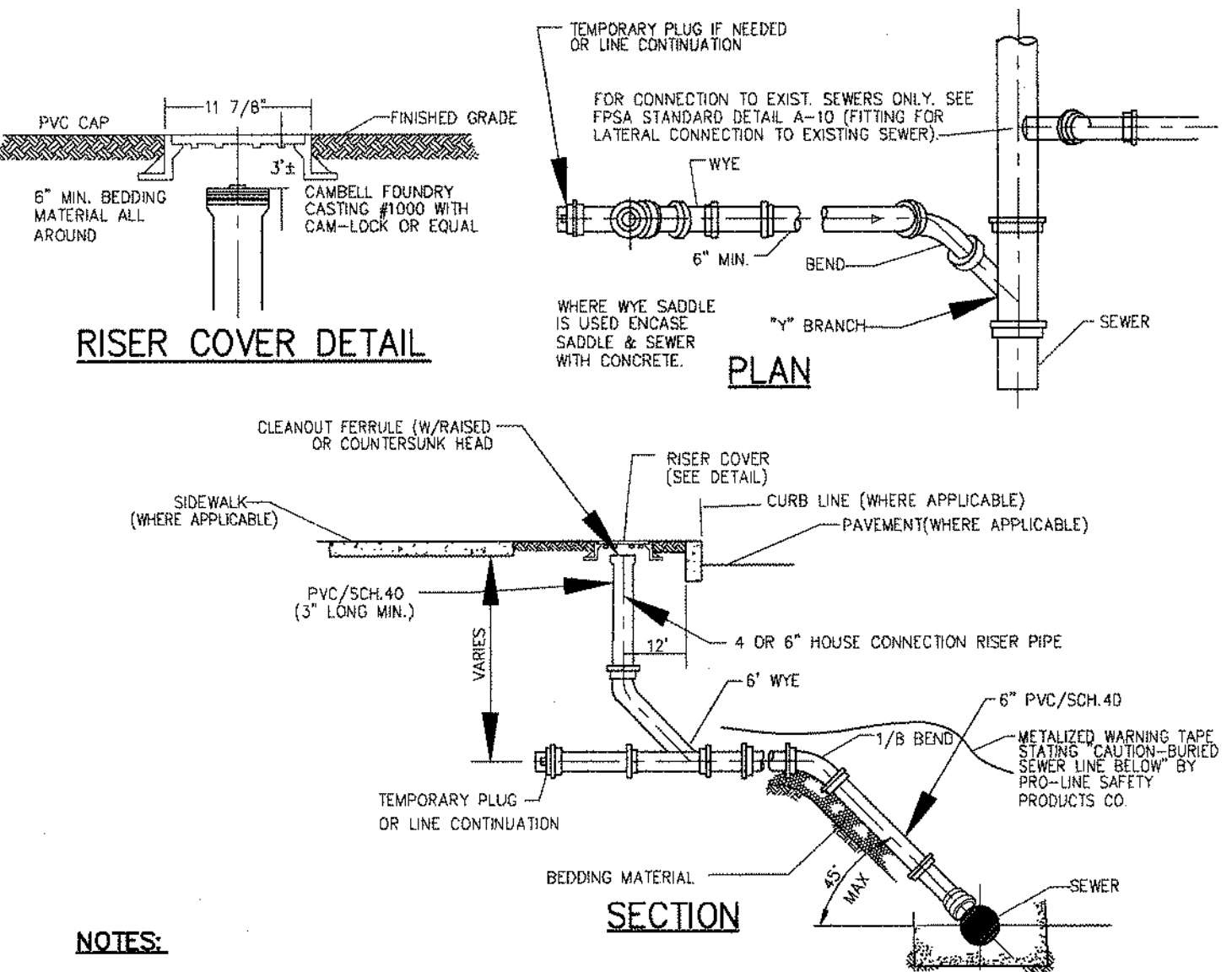
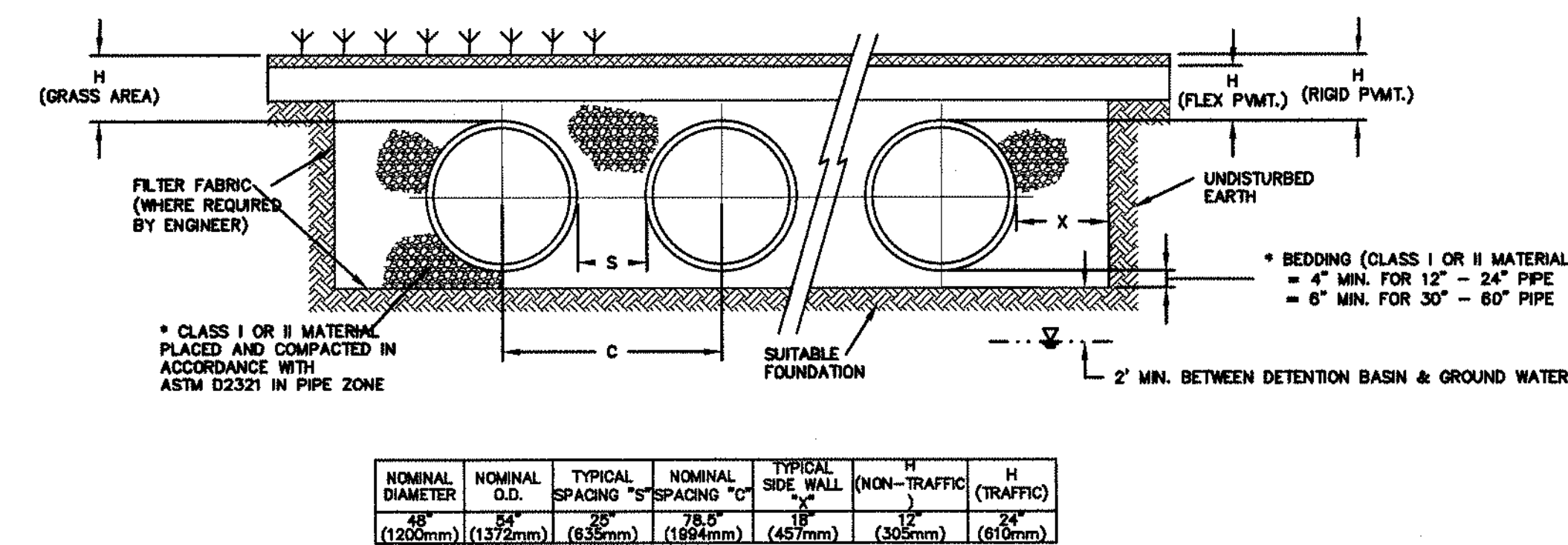
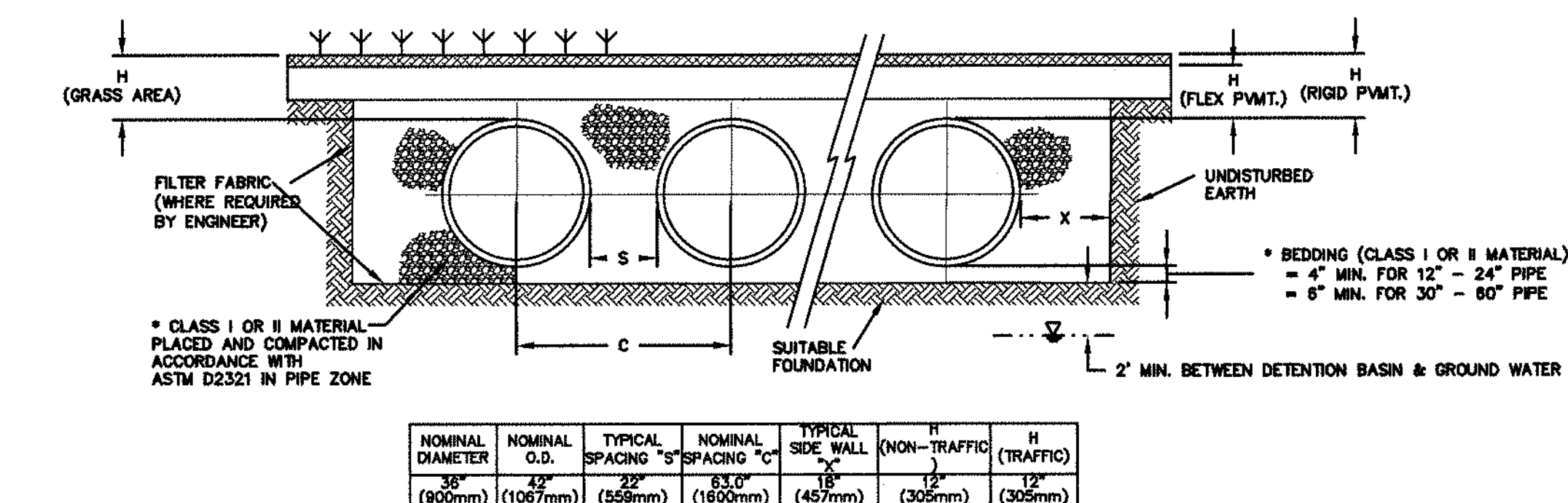
- NOTES:
1. ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS," LATEST EDITION.
 2. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
 3. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE PINES INTO THE BACKFILL MATERIAL WHEN REQUIRED. SEE ASTM D2321.
 4. GEOTEXTILE FABRIC: A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF PINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
 5. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTECHNICAL MATERIAL.
 6. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4" - 24" (100mm - 600mm), 6" (150mm) FOR 30" - 60" (750mm - 1500mm).
 7. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6' ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 8. MINIMUM COVER: MINIMUM COVER OVER ALL RETENTION/DETENTION SYSTEMS IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" (JP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" - 60" DIAMETER PIPE MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF ROAD PAVEMENT.
 9. FOR INSTALLATION RECOMMENDATIONS, SEE 702 RETENTION-RETENTION SYSTEM (CROSS SECTION) AND 703 RETENTION-DETENTION SYSTEM (RISER AND CLEANOUTS).



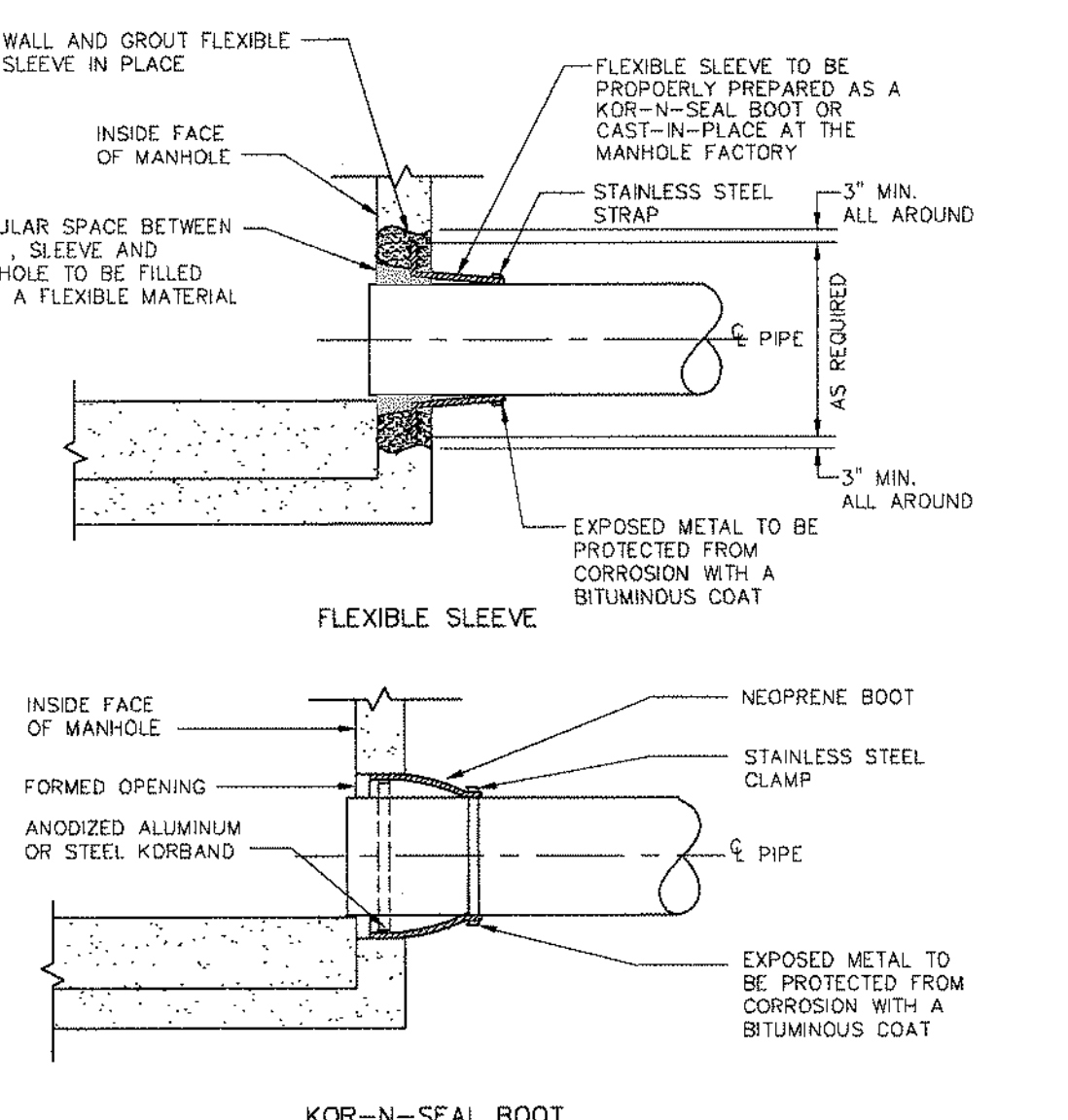
TYPICAL PLAN & ELEVATION VIEW OF SUBSURFACE DETENTION BASIN #2
SCALE N.T.S.



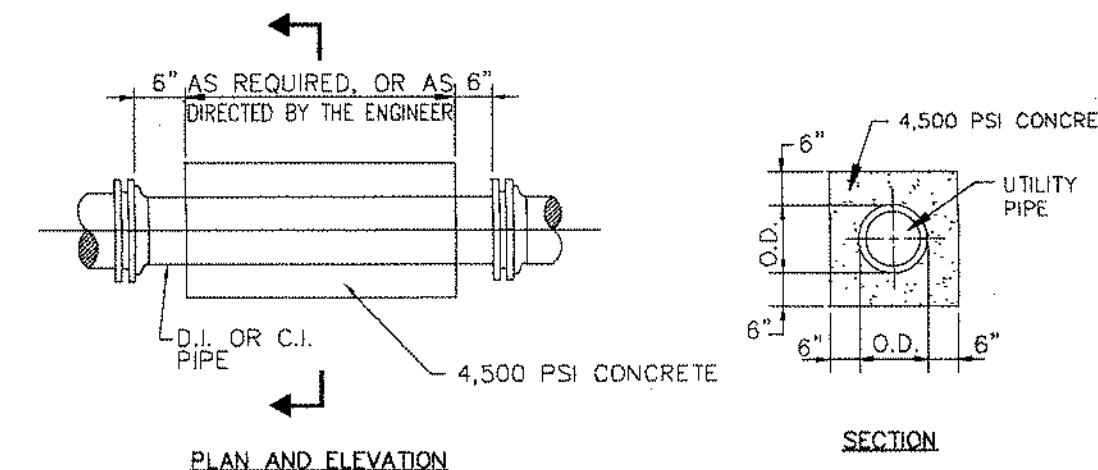
TYPICAL RISER/CLEANOUT (C.O.) DETAIL
SCALE N.T.S.



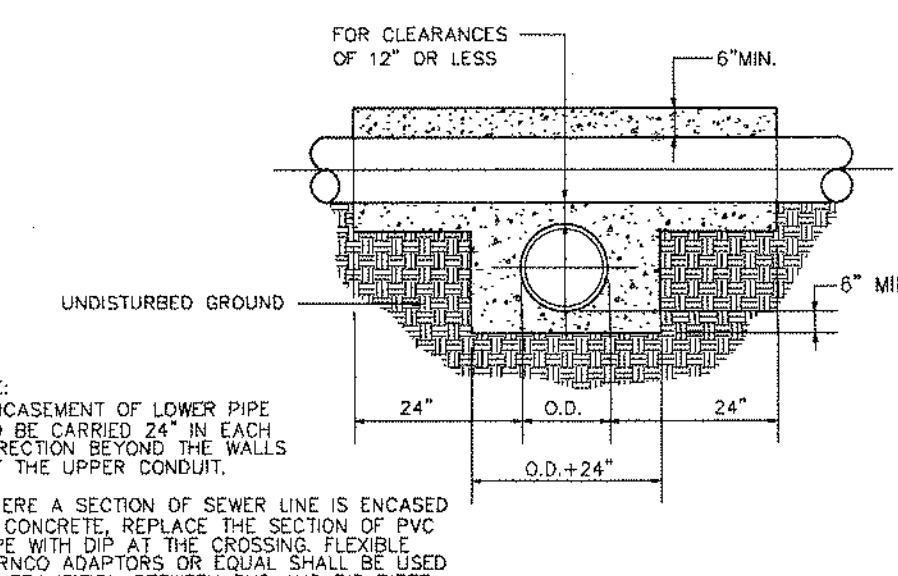
SANITARY SEWER DETAIL
SCALE - N.T.S.



SANITARY SEWER CONNECTION FOR PVC PIPING
SCALE - N.T.S.



CONCRETE ENCASEMENT DETAIL
(WHERE REQ'D, IF NECESSARY)
SCALE N.T.S.



UTILITY CROSSING
SCALE - N.T.S.

8	NO CHANGES	03/07/2023	JMP
7	ISSUED TO PLANNING BOARD	10/25/2022	JMP
6	REVISED PER NJDEP COMMENTS	06/08/2020	JMP
5	REVISED PER NJDEP COMMENTS	02/28/2020	JMP
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2	UPDATED FOR COMPLETENESS PER BOARD PROFESSIONALS	04/18/2017	JMP
1	PRELIMINARY AND FINAL SITE PLAN APPLICATION PREPARED FOR REDWOOD, L.L.C. 200 PLEASANT VALLEY WAY BLOCK 151 LOT 33 TOWNSHIP OF WEST ORANGE ESSEX COUNTY NEW JERSEY		

CONSTRUCTION DETAILS



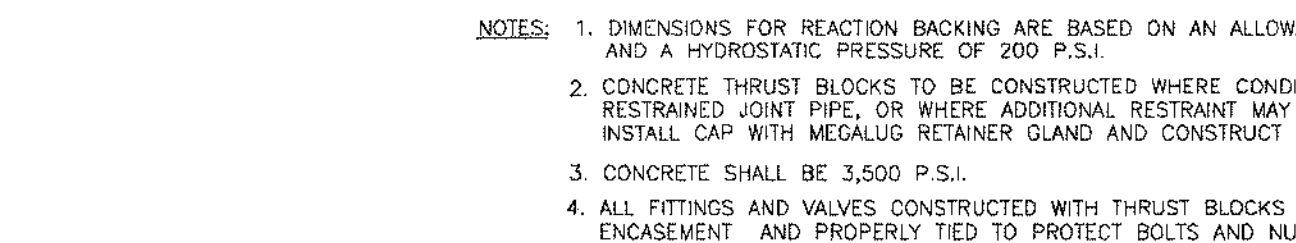
J. MICHAEL PETRY-PE, PP, RA
NJ PROFESSIONAL ENGINEER LIC. NO. 36985
DATED 10/10/19

Designer: JMP
Draftsman: JMK/SPD
Checked By: JMP
Project No: 19-0019
Scale: AS NOTED
Sheet:
SP-15

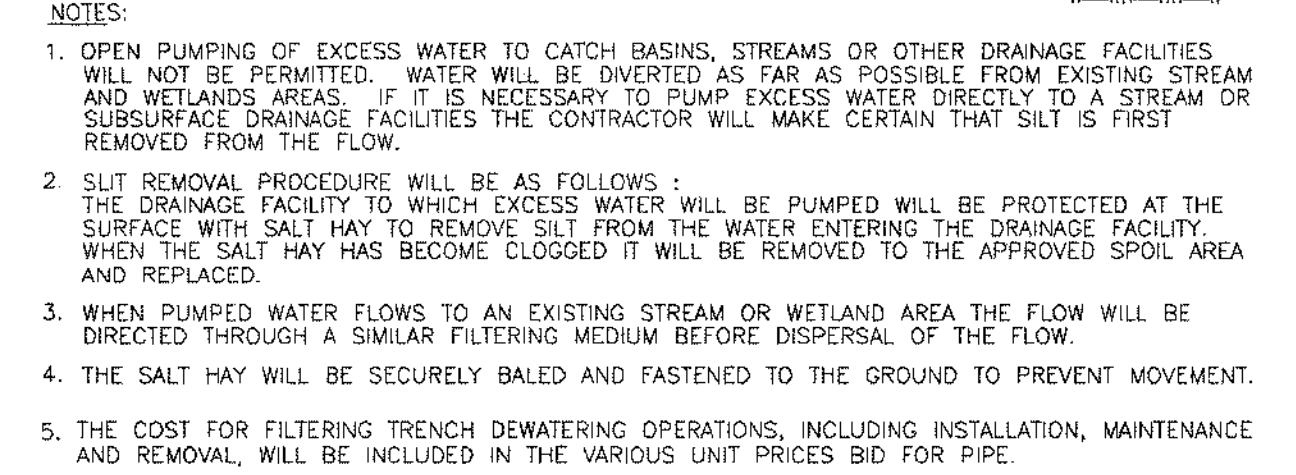
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- LOCATIONS OF THE EXISTING UTILITIES ARE APPROXIMATE AND NOT NECESSARILY COMPLETE. THE CONTRACTOR IS CAUTIONED THAT THERE MAY BE UNDERGROUND UTILITIES OTHER THAN THOSE SHOWN ON THE DRAWINGS, AND THE CONTRACTOR WILL NOTIFY ALL UTILITY COMPANIES PRIOR TO THE START OF WORK AND REQUEST FIELD LOCATION OF ALL UNDERGROUND UTILITIES.
2. THE MINIMUM EARTH COVER OVER ALL NEW WATER MAINS WILL BE FOUR (4) FEET UNLESS OTHERWISE INDICATED ON DRAWINGS. PIPE WILL BE DUCTILE IRON, CEMENT-LEADED WITH RESTRAINED OR PUSH-ON JOINTS, UNLESS OTHERWISE INDICATED. PIPE CLASSIFICATION FOR THE WATER MAINS WILL BE CLASS 52. ALL FITTINGS WILL BE DUCTILE IRON CEMENT-LEADED WITH MECHANICAL JOINTS, WITH RETAINER GLANDS, CLASS 350, UNLESS OTHERWISE INDICATED ON DRAWINGS OR REQUIRED BY THE ENGINEER. ALL PIPE AND FITTINGS WILL BE POLYETHYLENE ENCLOSED.
3. EXCESS EXCAVATED MATERIAL WILL BE DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR WILL MAKE ARRANGEMENTS TO DISPOSE OF THE MATERIAL AT A SUITABLE LOCATION. DISPOSAL OF ALL MATERIAL, GRADING AND RESTORING THE EXISTING DRIVEWAYS, SITES, AND DRIVEWAYS MUST BE PERFORMED AT THE SOLE COST OF THE CONTRACTOR.
4. THE MAXIMUM ALLOWABLE JOINT DEFLECTION FOR DUCTILE IRON PIPE WILL BE IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS AND AWWA STANDARDS.
5. PROVIDE A MINIMUM VERTICAL CLEARANCE OF 12 INCHES BETWEEN WATER LINES AND UTILITIES OR OBSTRUCTIONS, UNLESS OTHERWISE SHOWN.
6. ALL FITTINGS ARE TO BE MECHANICAL JOINT WITH RETAINER GLANDS. HOWEVER, SOME FITTINGS WILL REQUIRE THE INSTALLATION OF THRUST BLOCKS AS SHOWN ON THE DRAWINGS. PROVIDE CONCRETE THRUST BLOCKS IN ACCORDANCE WITH DETAILS OR AS NOTED ON THE DRAWINGS, OR AS REQUIRED BY SPECIFIC SOIL CONDITIONS. ENCOUNTERED TYPICAL THRUST REACTION DETAILS SHOWN ON THE DRAWINGS ARE MINIMUM REQUIREMENTS. WHEN GALVANIZED RODS ARE TO BE USED FOR ANCHORING FITTINGS OR VALVES, THE COST OF SUCH MATERIALS WILL BE INCLUDED IN THE UNIT PRICES BID FOR DUCTILE IRON FITTINGS AND GATE VALVES.
7. NOTIFY THE ENGINEER, WATER, AND, FIRE DEPARTMENTS 48 HOURS PRIOR TO MAKING CONNECTIONS TO EXISTING WATER MAINS.
8. THE CONTRACTOR WILL SUPPLY AND ERECT NECESSARY WARNING SIGNS AND PROPER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, AND IN CONFORMANCE WITH THE REQUIREMENTS OF THE KANSAS STATE POLICE DEPARTMENT. THE CONTRACTOR WILL FURNISH FLAGMEN AS MAY BE REQUIRED TO MAINTAIN TRAFFIC. THE CONTRACTOR WILL CONTACT THE POLICE DEPARTMENT PRIOR TO STARTING ANY WORK AND NOTIFY THEM OF HIS PROPOSED OPERATIONS.
9. THE CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE PROPER BRACING OF EXISTING UTILITIES AS MAY BE REQUIRED TO PREVENT DAMAGE DUE TO CONSTRUCTION OPERATIONS. THE CONTRACTOR WILL ARRANGE FOR PROPER BRACING OF ALL EXISTING UTILITIES, UTILITY POLES, AND OTHER STRUCTURES WITHIN THE VICINITY OF THE WORK WHICH MAY BE AFFECTED BY HIS OPERATIONS. ALL COST ASSOCIATED WITH THIS WORK WILL BE INCLUDED IN THE VARIOUS UNIT PRICES BID FOR THE CONTRACT WORK.
10. THE CONTRACTOR WILL INSTALL TEMPORARY AIR RELEASE TAPS AND SAMPLING TAPS WITH COPPER SAMPLING PIPE FOR TESTING AND DISINFECTION AS NEEDED OR AS REQUIRED BY THE ENGINEER. THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE SAMPLING PIPE AND CLOSE OFF THE TAP AT THE MAIN AFTER ALL TAPS AND CHANGES HAVE BEEN COMPLETED AND WHEN APPROVED BY THE ENGINEER. THE FURNISHING, INSTALLATION, AND REMOVAL OF TAPS AND PIPE WILL BE INCLUDED IN UNIT PRICE BID FOR TESTING AND DISINFECTION.
11. THE CONTRACTOR WILL BACKFILL AND PAVE TO THE TRENCH AT THE END OF EACH DAY AND WILL TAKE ANY NECESSARY PRECAUTION TO PROVIDE A SAFE AND ACCESSIBLE WORK AREA FOR VEHICULAR AND PEDESTRIAN TRAFFIC.
12. THE GENERAL LOCATION OF FIRE HYDRANTS AND CURB BOXES ARE SHOWN ON THE DRAWINGS. HYDRANTS AND CURB BOXES WILL BE LOCATED IN THE FIELD BY THE WATER DEPARTMENT PRIOR TO CONSTRUCTING THE WATER MAIN. DUE TO FUTURE ROAD RECONSTRUCTION WHICH WILL RESULT IN RELOCATION OF EXISTING CURBS AND CHANGES IN THE GRADE OF THE EXISTING ROAD, THE ELEVATION FOR SETTING THE HYDRANT AND VALVE BOX WILL BE PROVIDED BY THE WATER DEPARTMENT.
13. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING VESSEL TO ALL DRIVEWAYS AND ALLEYS THROUGHOUT THE PROJECT. THE VESSEL WILL BE LOCATED ALONG THE CONSTRUCTION ROUTE TO THE MAXIMUM PRACTICAL.
14. THE CONTRACTOR WILL BE RESPONSIBLE TO EXCAVATE IN ADVANCE OF PIPE WORK TO DETERMINE THE EXACT LOCATION, SIZE, TYPE, AND DEPTH OF EXISTING UTILITY NOTED ON THE DRAWINGS PRIOR TO THE CONSTRUCTION OF THE NEW WATER MAIN. EXCEPT FOR THE EXCAVATION OF TEST PITS AS NOTED ON THE DRAWINGS OR WHEN DIRECTED BY THE ENGINEER, NO ADDITIONAL PAYMENT WILL BE MADE FOR WORK WHEN EXCAVATED. THE COST WILL BE INCLUDED IN THE VARIOUS UNIT PRICES BID FOR THE CONTRACT WORK.
15. THE CONTRACTOR WILL BRACE AND SUPPORT ALL EXISTING CURB IN THE IMMEDIATE VICINITY OF THE CONSTRUCTION WORK. PLANKS WILL BE PLACED OVER CURBS TO PREVENT DAMAGE BY THE CONTRACTOR'S EQUIPMENT. ANY CURB WHICH IS DAMAGED, DISTURBED, OR REMOVED IN ANY OTHER MANNER WHERE THE PIPE LINE CROSSES EXISTING CURBING, AS SHOWN ON THE DRAWINGS, WILL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. CURB WILL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THE DRAWINGS.
16. THE DRAWINGS SHOW THE EXISTING CONDITIONS WHICH ARE LIKELY TO OBTAIN. THE PRODUCTION OF THE WORK, INsofar AS THEY HAVE BEEN DETERMINED, THESE DRAWINGS SHOULD NOT BE USED FOR SCALING OF DIMENSIONS OR FOR DETERMINING RIGHT-OF-WAY AND PROPERTY LIMITS.
17. ANY EXISTING FIRE HYDRANTS TO BE REMOVED SHALL BE DELIVERED TO THE WATER DEPT. YARD.
18. WORK PERFORMED ON COUNTY ROADS WILL BE LIMITED TO THE HOURS OF 9:00 A.M. TO 4:00 P.M., UNLESS OTHERWISE PERMITTED BY THE COUNTY OR BY THE ENGINEER.
19. THE APPROXIMATE LOCATION OF WATER SERVICE CONNECTIONS ARE SHOWN ON THE DRAWINGS. EXACT LOCATION TO BE DETERMINED IN THE FIELD BY OWNER.
20. CONSTRUCTION AND TRANSFER OF SERVICES WILL BE PERFORMED ONLY AFTER MAIN HAS BEEN TESTED AND DISINFECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THIS INCLUDES THE INSTALLATION OF THE SERVICE CORPORATIONS.
21. WHERE EXISTING MAINS ARE TO BE ABANDONED IN PLACES, ALL OPENINGS FROM CUT PORTIONS WILL BE COMPLETELY SEALED WITH NON-SHRINK GROUT, SETTING CEMENT, AS APPROVED BY THE ENGINEER. DO NOT BACKFILL UNTIL CEMENT IS CURED.
22. INSTALLATION OF NEW COPPER SERVICES WILL BE PERFORMED BY OPEN TRENCH EXCAVATION IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS. THE EMPLOYMENT OF ALTERNATE METHODS WILL NOT BE PERMITTED.

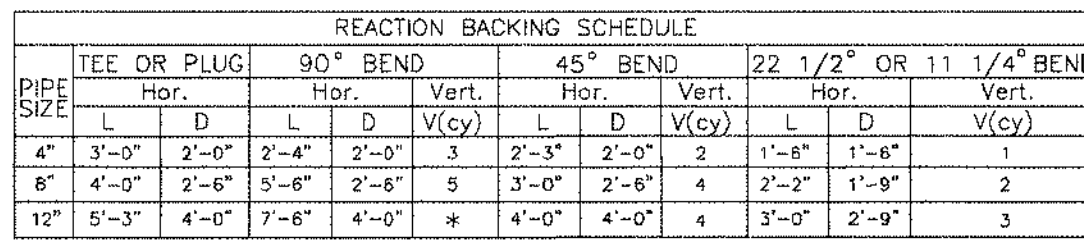
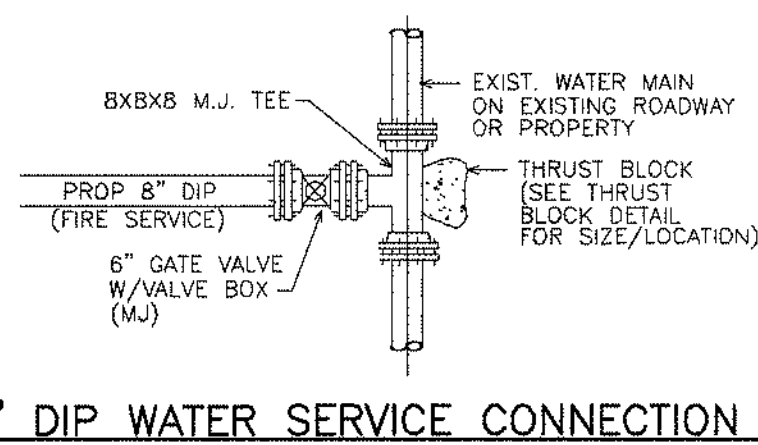
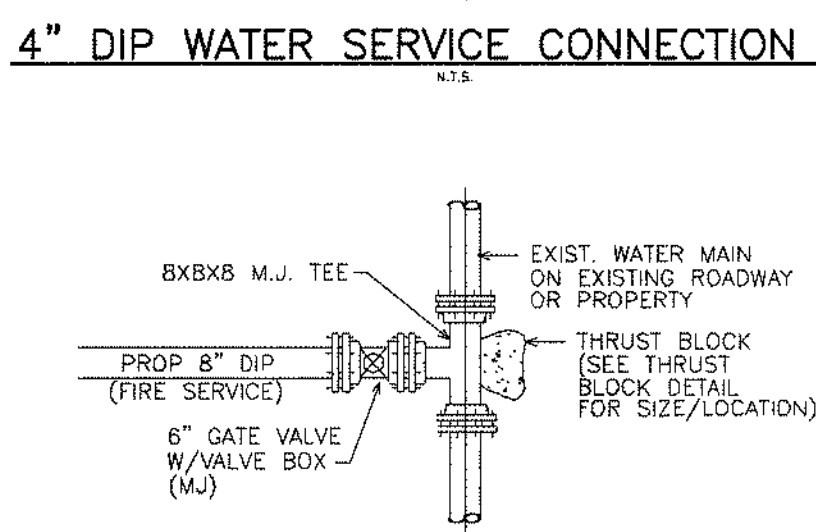
- 1.) WATER MAINS SHALL BE DUCTILE IRON PIPE, CLASS 52 CEMENT LINED.
- 2.) WATER METERS (MAKE AND MODEL) SHALL BE COORDINATED WITH THE TOWNSHIP OF MONTCLAIR WATER DEPARTMENT TO ENSURE COMPATIBILITY WITH EXISTING EQUIPMENT. WATER METERS ARE TO BE PROVIDED AND INSTALLED BY THE APPLICANT UNDER THE SUPERVISION OF THE TOWNSHIP.
- 3.) ALL WATER MAINS AND SERVICE LINES SHALL HAVE A MINIMUM OF 4 FEET OF COVER.
- 4.) GATE VALVES SHALL BE INSTALLED AT EACH LEG OF ANY INTERSECTION OF WATER MAIN PIPING. GATE VALVE INTERIOR AND EXTERIOR SHALL BE FUSION EPOXY COATED. THE OPERATING NUT SHALL BE 2 INCH SQUARE, AN ARROW SHOWING THE DIRECTION OF OPENING AND THE WORK "OPEN" SHALL BE ON THE FLANGE OF THE OPERATING NUT. GATE VALVES SHALL BE SUITABLE FOR WATER OPERATING PRESSURES OF 250 psi. BURIED VALVES SHALL OPEN LEFT – COUNTER CLOCKWISE. GATE VALVES SHALL BE RESILIENT SEAT GATE VALVES, CATALOG NO. A-2360 AS MANUFACTURED BY THE MULLER COMPANY.
- 5.) ALL WATER MAIN PIPING IS TO BE MECHANICALLY RESTRAINED AT FITTINGS. CONCRETE ANCHORAGE IS ONLY TO BE USED WITH TOWNSHIP APPROVAL.
- 6.) ALL WATER MAINS SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH AWWA STANDARDS. TESTING AND DISINFECTION SHALL BE WITNESSED BY AUTHORIZED TOWNSHIP PERSONNEL.



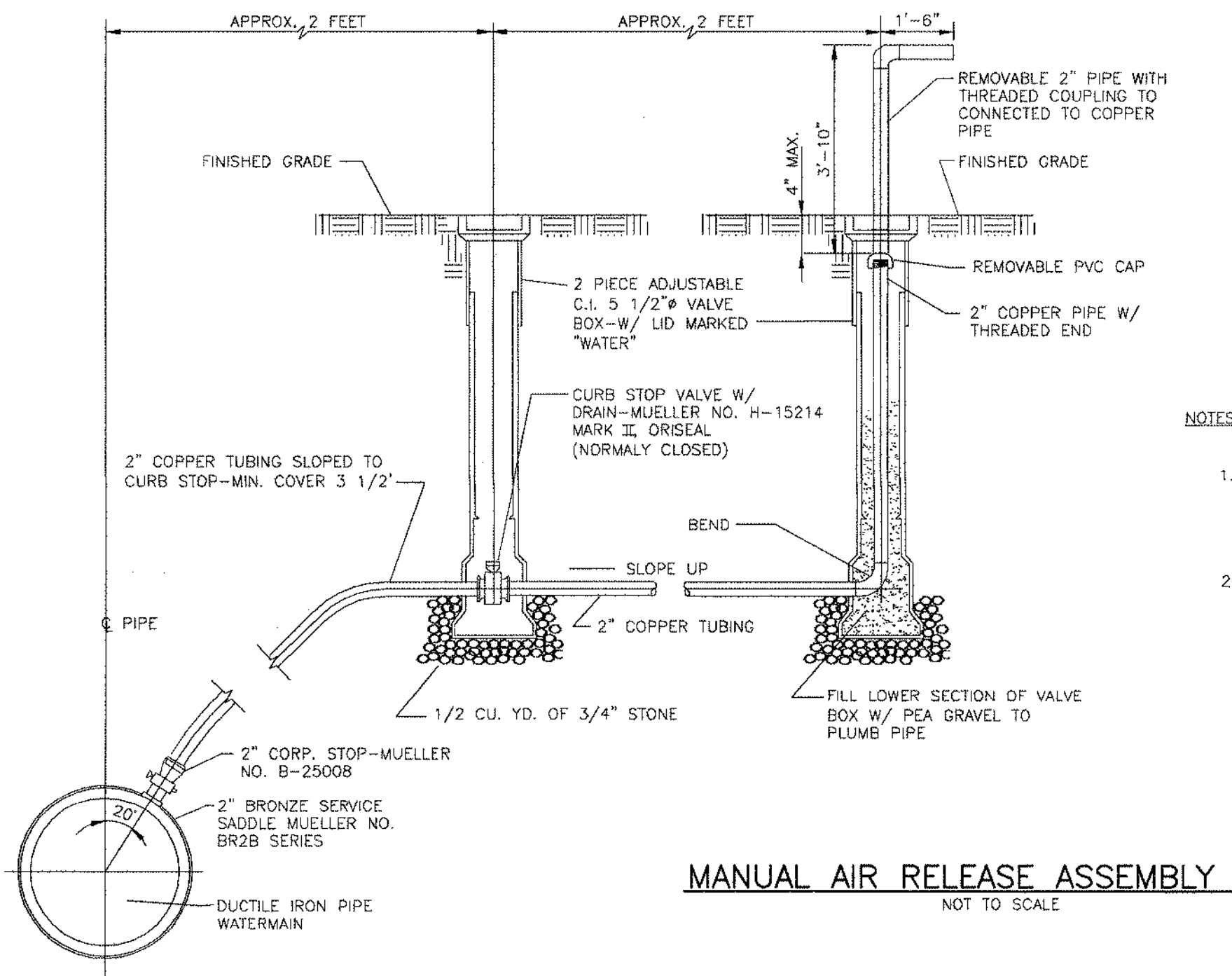
N.T.S.



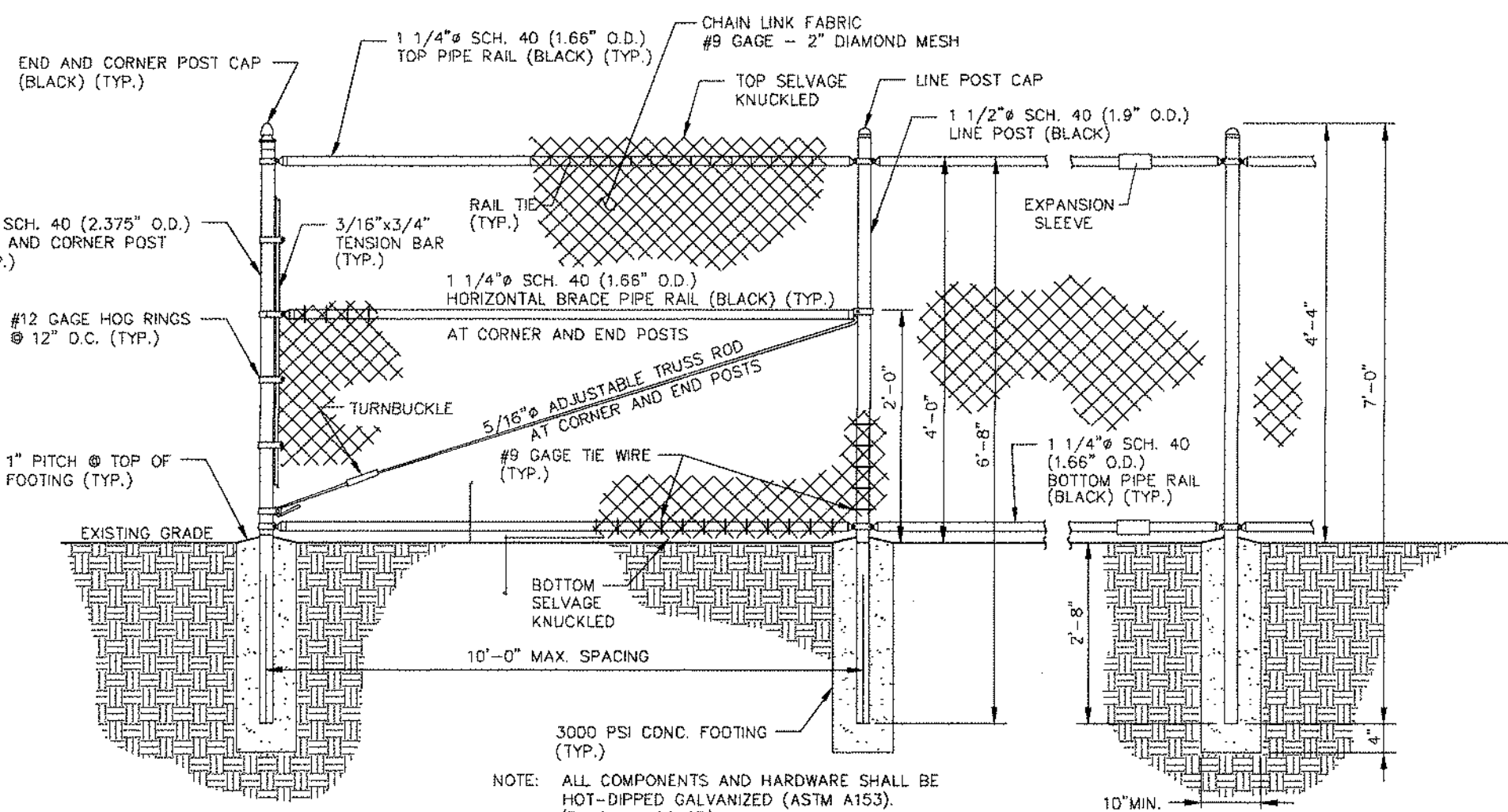
NOT TO SCALE



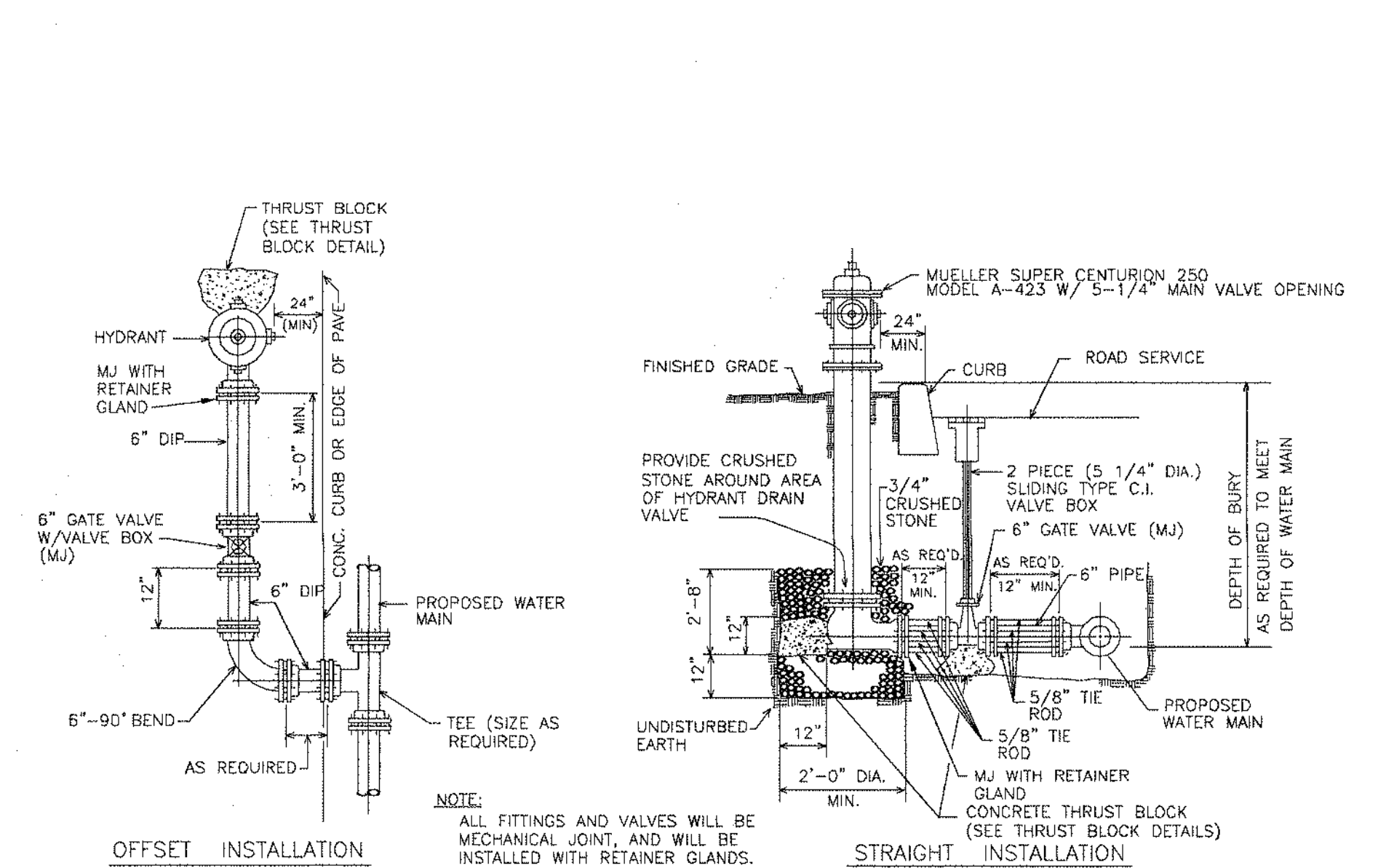
* REQUIRES SPECIAL ANCHORAGE, SEE CONTRACT PLAN.



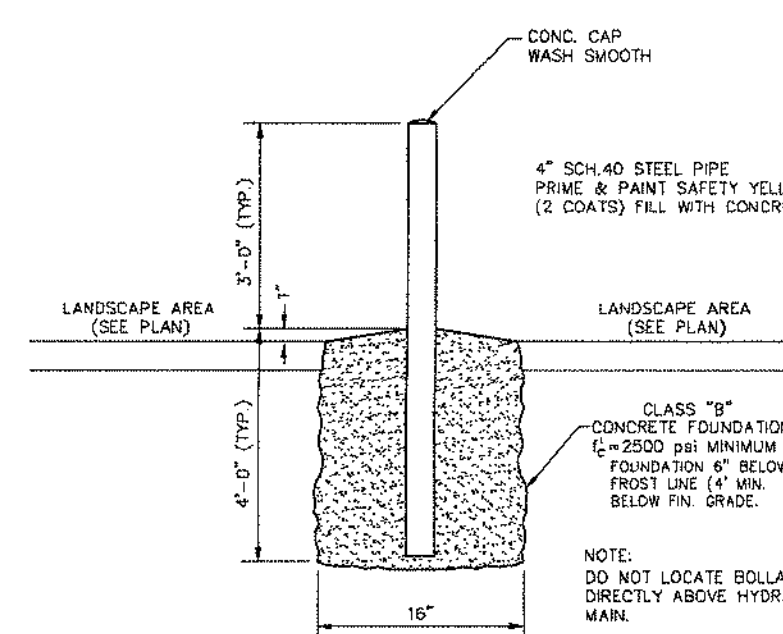
NOT TO SCALE



SCALE - N.T.S.



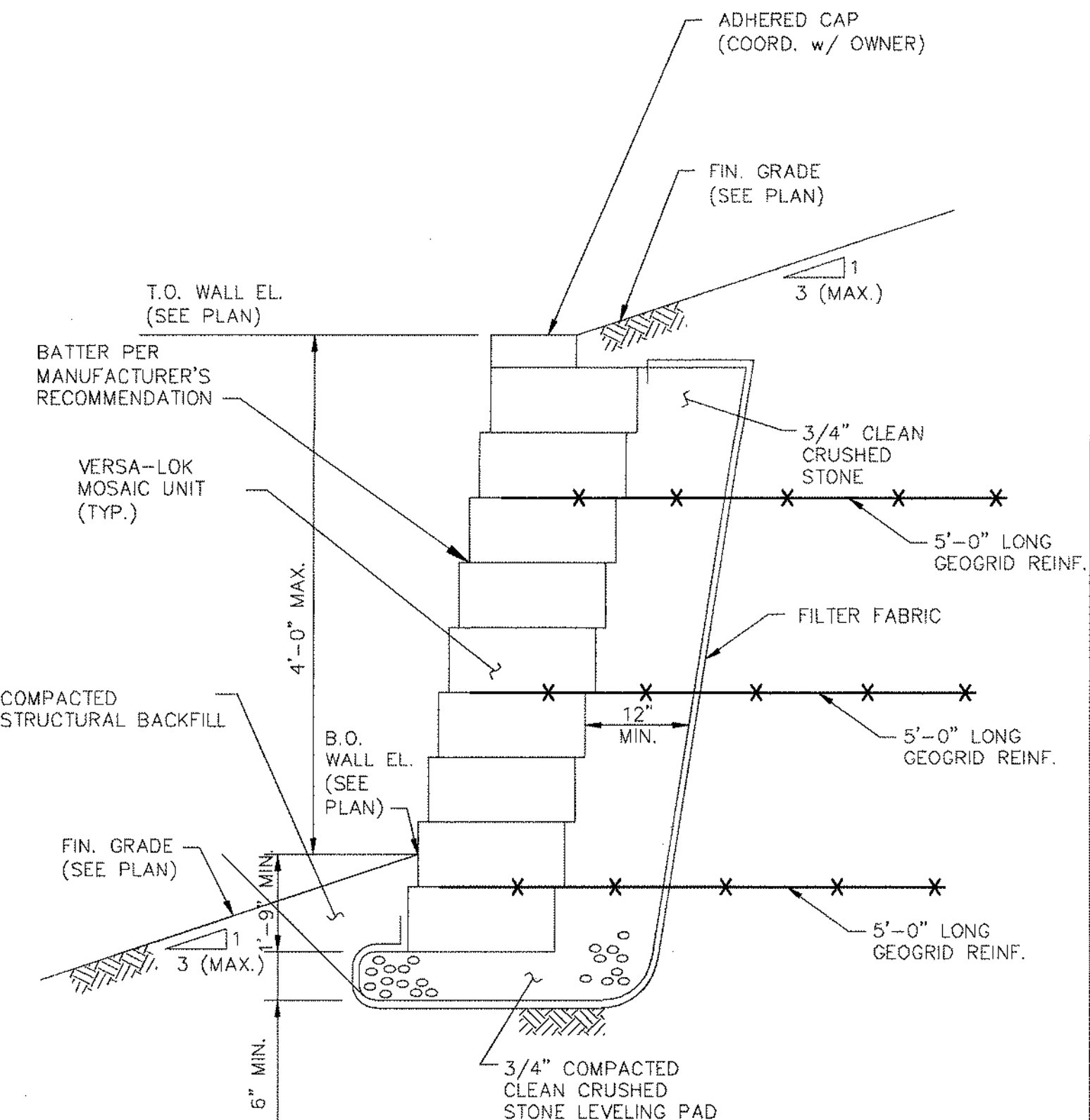
N.T.S.



SCALE N.T.S.

NOTES

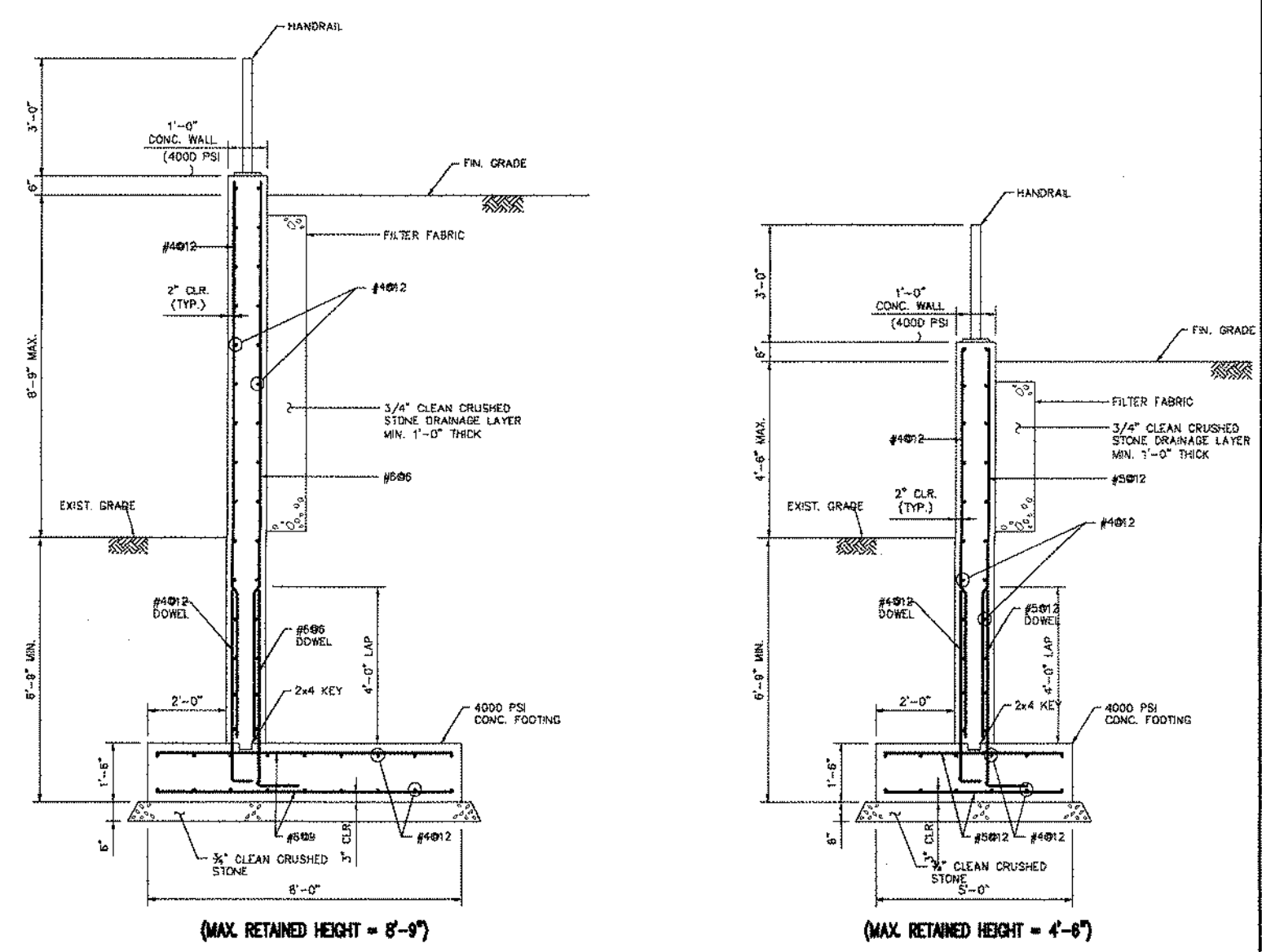
1. THE EXACT LOCATION AND ORIENTATION OF THE AIR RELEASE VALVE ASSEMBLY WILL BE DETERMINED IN THE FIELD BY THE ENGINEER. THE CURB STOP VALVE AND UPPER PIPE ASSEMBLY SHALL NOT BE CONSTRUCTED UNTIL MAIN HAS BEEN HYDROSTATICALLY PRESSURE TESTED.
2. ALL COSTS ASSOCIATED WITH CONSTRUCTION OF THE AIR RELEASE VALVE ASSEMBLY INCLUDING LABOR, MATERIALS, AND EQUIPMENT WILL BE INCLUDED IN THE VARIOUS UNIT PRICES BID FOR THE WATER MAIN.



1. MODULAR BLOCK WALLS SHALL BE CONSTRUCTED WITH MOSAIC WALL UNITS AS MANUFACTURED BY VERSA-LOK RETAINING WALL SYSTEMS, INC OR ACCEPTED EQUAL. COORDINATE AND COLOR OF UNITS WITH OWNER.
2. INSTALLATION OF MODULAR BLOCK WALLS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS AND SPECIFICATIONS.
3. COORDINATE STYLE AND COLOR OF UNITS WITH OWNER.
4. WALLS SHALL STEP IN ELEVATION AT BOTH TOP AND BOTTOM AS REQUIRED TO CONFORM WITH PROPOSED FINISHED GRADE AT THE TOP OF THE WALL AND EXISTING GRADE AT THE BOTTOM OF THE WALL. ARRANGEMENT OF BLOCK, CAP STONE AND CRODDED STONE BASE AT WALL STEPS SHALL CONFORM TO MANUFACTURER'S STANDARD RECOMMENDATIONS.
5. CUT GEOGRID REINFORCING AS REQUIRED TO ACCOMMODATE INLET AND PRIVACY FENCE FOUNDATION CONCRETE. DO NOT OMIT FABRIC ENTIRELY AT PRIVACY FENCE LOCATIONS.

(4'-0" MAXIMUM RETAINED HEIGHT)

(NOT TO SCALE)



NOTE:

1. BOTTOM OF FOOTING TO EXTEND NO LESS THAN 3 FEET BELOW THE INVERT OF THE CHANNEL.
2. CHANNEL INVERT AT LOCATION OF OUTFALL #1/ CONCRETE RETAINING WALL IS 356.80. (FOOTING TO BE SET NO LESS THAN ELEV. 353.80)

8	NO CHANGES	03/07/2020	JMP
7	ISSUED TO PLANNING BOARD	10/09/2022	JMP
6	REVISED PER NJDEP COMMENTS	05/08/2020	JMP
5	REVISED PER NJDEP COMMENTS	02/09/2020	JMP
4	MODIFIED BUILDING AND PARKING LAYOUT	10/30/2019	JMP
REVISION	DESCRIPTION	DATE	BY

PRELIMINARY AND FINAL SITE PLAN APPLICATION

REDWOOD, L.L.C.
200 PLEASANT VALLEY WAY
BLOCK 151 LOT 33
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY NEW JERSEY

PETRY
ENGINEERING, LLC
DIVISION OF COASTAL/AFRAPS LICENSE NUMBER 26102019M00
185 PASSAIC AVENUE • FARMVILLE, NC • NEW JERSEY • 07004
TEL. (336) 257-7004 FAX (336) 257-7978


J. MICHAEL PETRY-PE, PP, RA
NJ PROFESSIONAL ENGINEER No. 36682 DATED 09/20/17

Designer: JMP

Draftsmen: DJK/SPD

Checked By: JMP

Project No.: 16-C012

Scale: AS NOTED

CD 1.

SF-10

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN A RAISED IMPRESSION SEAL OF THE UNDERSIGNED PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT.