

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN AND PROFILE OF
BEACH ROAD OVER LAGOON POND
(STRUCTURE NO. O-01-001 = T-04-001)

IN THE CITY/TOWN OF
OAK BLUFFS AND TISBURY
DUKES COUNTY

FEDERAL AID PROJECT NO. BR-002S(462)

OAK BLUFFS — TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	1	254
PROJECT FILE NO.: 604029			

TITLE AND INDEX SHEET

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GENERAL NOTES:

ALL WORK DONE UNDER THIS CONTRACT SHALL BE IN CONFORMANCE WITH THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES ENGLISH EDITION, DATED 1988, DECEMBER 16, 2011 STANDARD SPECIAL PROVISIONS, THE JUNE 15, 2012 SUPPLEMENTAL SPECIFICATIONS, THE MARCH 2012 CONSTRUCTION STANDARD DETAILS, NOTES ON WALKS AND WHEELCHAIR RAMPs FOR DESIGNERS AND CONSTRUCTION ENGINEERS MARCH 2012, THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, THE RULES AND REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004), THESE PLANS, THE SPECIAL PROVISIONS, AND ALL AMENDMENTS WILL GOVERN.

BEACH ROAD
DESIGN DESIGNATION

ROADWAY CLASSIFICATION	RURAL MINOR ARTERIAL
DESIGN SPEED (MPH)	35 MPH
ADT (PRESENT)	15500
ADT (2029)	17300
K	N/A
D	N/A
T (PEAK HOUR)	N/A
T (AVERAGE DAY)	6%
DHV	N/A
DDHV	N/A

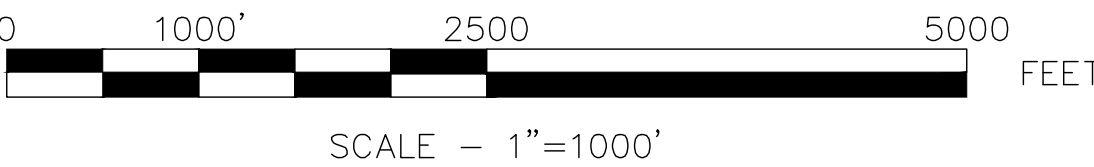
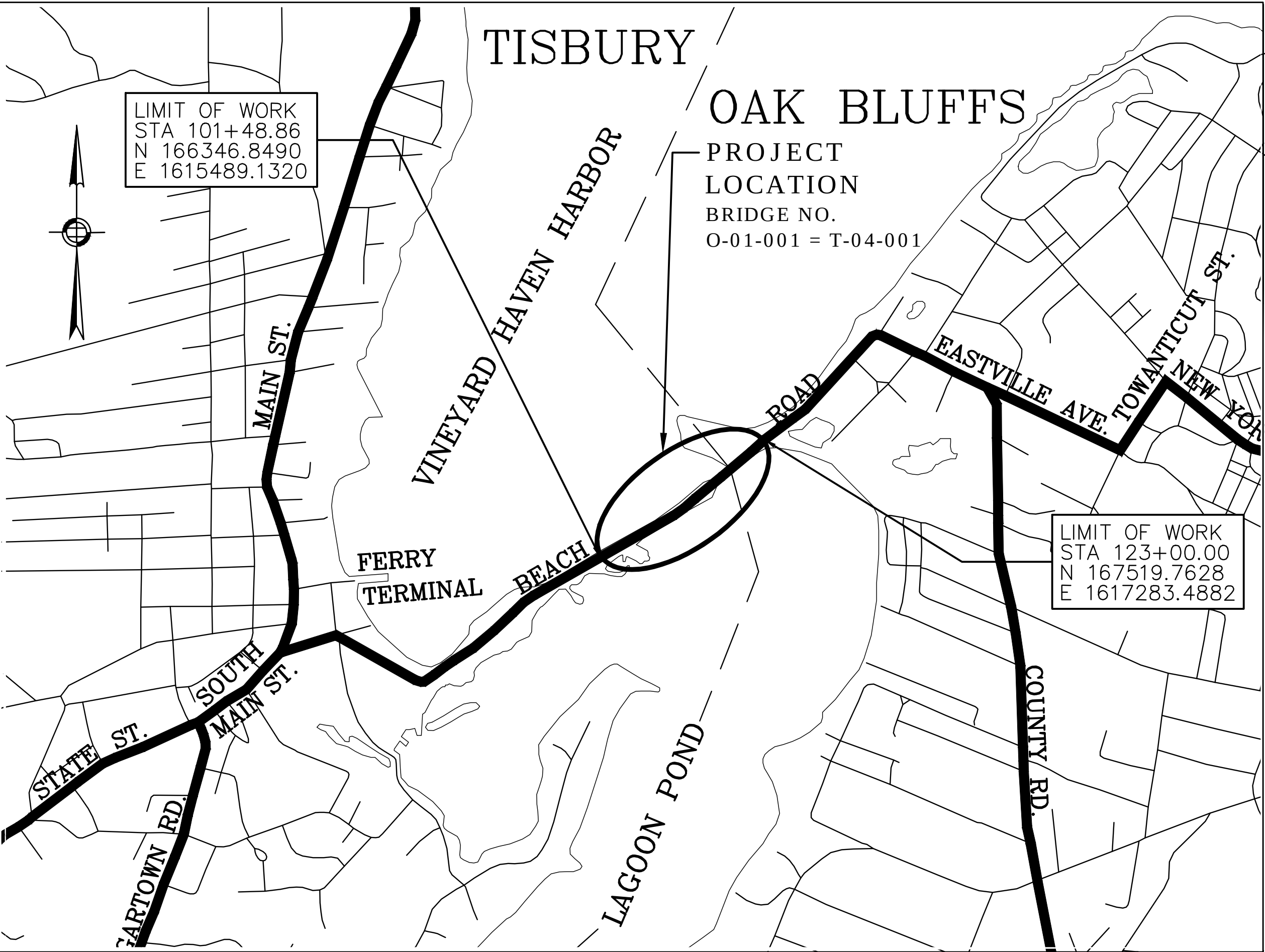
CONVENTIONAL SIGNS

COUNTY, CITY, OR TOWN LAYOUT LINE	_____
STATE HIGHWAY LAYOUT LINE (ALTERATION)	_____
STATE HIGHWAY LAYOUT LINE	_____
FENCE LINE	-x-x-x-
BASE LINE OR SURVEY LINE	_____
RIGHT OF WAY LINE	N 57° 18' 41" E 59.57
CULVERT	_____

PROPOSED SURFACE	_____
PRESENT SURFACE	_____
PRES. 98.2	102.67
PROP. 74	74

ELEVATIONS	_____
POLE	_____

HORIZONTAL DATUM = MASSACHUSETTS ISLAND COORDINATE SYSTEM (NAD83)
VERTICAL DATUM = 1934 HALF TIDE
MEAN LOW WATER = -0.4'
MEAN HIGH WATER = +1.4'



NOTE

LENGTH OF PROJECT = 2,151.14 FT = 0.407 MILES

PS&E SUBMITTAL
OCTOBER 19, 2012

PLANS PREPARED BY

PARSONS
100 HIGH STREET, BOSTON, MA 02110

DATE	DESCRIPTION	REV #



RECOMMENDED FOR APPROVAL

CHIEF ENGINEER _____ DATE _____

APPROVED

DIVISION ADMINISTRATOR _____ DATE _____

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR _____ DATE _____

GENERAL SYMBOLS

EXISTING	PROPOSED	
		CATCH BASIN (GUTTER INLET OR LEACHING BASIN)
		CATCH BASIN (GUTTER INLET) WITH CURB INLET
		DOUBLE CATCH BASIN (WITH CURB INLET)
		CURB (BERM) TYPE NOTED
		EDGE OF PAVEMENT
		ELECTRIC HANDHOLE (NUMBER AS NOTED)
		ELECTRIC MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		SEWER MANHOLE
		DRAINAGE MANHOLE
		GAS GATE
		WATER GATE
		CURB STOP
		HYDRANT
		FIRE ALARM BOX
		PARKING METER
		STREET LIGHT
		LIGHTING BOLLARD
		UTILITY POLE
		GUY POLE
		DRAIN PIPE (DOUBLE LINE 24" & OVER)
		SEWER MAIN
		ELECTRIC DUCT
		GAS MAIN
		WATER MAIN
		TELEPHONE DUCT
		MAIL BOX
		HIGHWAY GUARD (TYPE NOTED)
		FENCE (SIZE & TYPE NOTED)
		HIGHWAY / PROPERTY BOUND (TYPE NOTED)
		CITY, TOWN OR COUNTY LAYOUT
		STATE HIGHWAY LAYOUT (S.H.L.O.)
		EASEMENT LINE
		PROPERTY LINE
		CITY, TOWN OR COUNTY BOUNDARY
		SURVEY TRAVERSE
		CONSTRUCTION BASELINE
		WHEELCHAIR RAMP
		WHEELCHAIR RAMP (ONE WAY)
		TREE (SIZE & TYPE NOTED)
		BORINGS & PAVEMENT CORES
		TEST PIT
		RETAINING WALL
		EXISTING TREE TO BE REMOVED
		HAYBALES AND SEDIMENTATION FENCE

PAVEMENT MARKINGS & SIGNING SYMBOLS

PROPOSED	
	PAVEMENT ARROW
	CROSSWALK--(2) 1ft WHITE LINES 10ft APART
	STOP LINE--1ft WHITE LINE
	SINGLE YELLOW CENTER LINE--6in YELLOW LINE
	BROKEN YELLOW CENTER LINE--6in YELLOW LINE
	DOUBLE YELLOW CENTERLINE--(2) 6in YELLOW LINES
	SOLID WHITE EDGE LINE--6in WHITE LINE
	SOLID WHITE LANE LINE--6in WHITE LINE



SIGN AND POST

ABBREVIATIONS

GENERAL		ALIGNMENT/GRADING
ABAN	ABANDON	CC CENTER OF CURVE
ADJ	ADJUST	CP CENTER POINT
APPROX	APPROXIMATE	POINT OF VERTICAL COMPOUND CURVE
BB	BITUMINOUS BERM	ELEV ELEVATION
BC	BITUMINOUS CURB	HP HIGH POINT
BL	BASELINE	LP LOW POINT
BO	BY OTHERS	PC POINT OF CURVE
BOS	BOTTOM OF SLOPE	PCC POINT OF COMPOUND CURVE
CC	CONCRETE CURB	PI POINT OF INTERSECTION
CONC	CONCRETE	POC POINT ON CURVE
ELEV	ELEVATION	PRC POINT OF REVERSE CURVE
EXIST	EXISTING	PT POINT OF TANGENT
FDN	FOUNDATION	PVC POINT OF VERTICAL CURVE
GC	GRANITE CURB	PVCC POINT OF VERTICAL COMPOUND CURVE
GE	GRANITE EDGING	PVI POINT OF VERTICAL INTERSECTION
HES	HIGH EARLY STRENGTH	PVRC POINT OF VERTICAL REVERSE CURVE
HMA	HOT MIX ASPHALT	PVT POINT OF VERTICAL TANGENT
LA	LANDSCAPE ARCHITECT	R RADIUS
LOP	LIMIT OF PAVING	
LP	LIGHT POLE	
MAX	MAXIMUM	
MIN	MINIMUM	
NIC	NOT IN CONTRACT	
NTS	NOT TO SCALE	
PVMT	PAVEMENT	
PGL	PROFILE GRADE LINE	
PROP	PROPOSED	
PSB	PLANTABLE SOIL BORROW	
REM	REMOVE	
REMOD	REMODEL	
RET	RETAIN	
R&R	REMOVE AND RESET	
R&REP	REMOVE AND REPLACE	
R&S	REMOVE AND STACK	
R&D	REMOVE AND DISPOSE	
SGC	SLOPED GRANITE CURB	
SRW	SOIL RETAINING WALL	
TOS	TOP OF SLOPE	
TSW	TOP OF SIDEWALK	
TYP	TYPICAL	
ACCMP	ASPHALT COATED CORRIGATED METAL PIPE	
CAP	CORRIGATED ALUMINUM PIPE	
CIP	CAST IRON PIPE	
CIT	CHANGE IN TYPE	
COND	CONDUIT	
DIP	DUCTILE IRON PIPE	
F&C	FRAME AND COVER	
F&G	FRAME AND GRATE	
HDPE	HIGH DENSITY POLYETHYLENE PIPE	
HYD	HYDRANT	
INV	INVERT ELEVATION	
PVC	POLY-VINYL-CHLORIDE PIPE	
PWW	PAVED WATER WAY	
RCP	REINFORCED CONCRETE PIPE	
TSV&B	TAPPING SLEEVE,VALVE & BOX	
UP	UTILITY POLE	

OAK BLUFFS – TISBURY
BEACH ROAD OVER LAGOON POND

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LEGEND, ABBREVIATIONS,
AND GENERAL NOTES

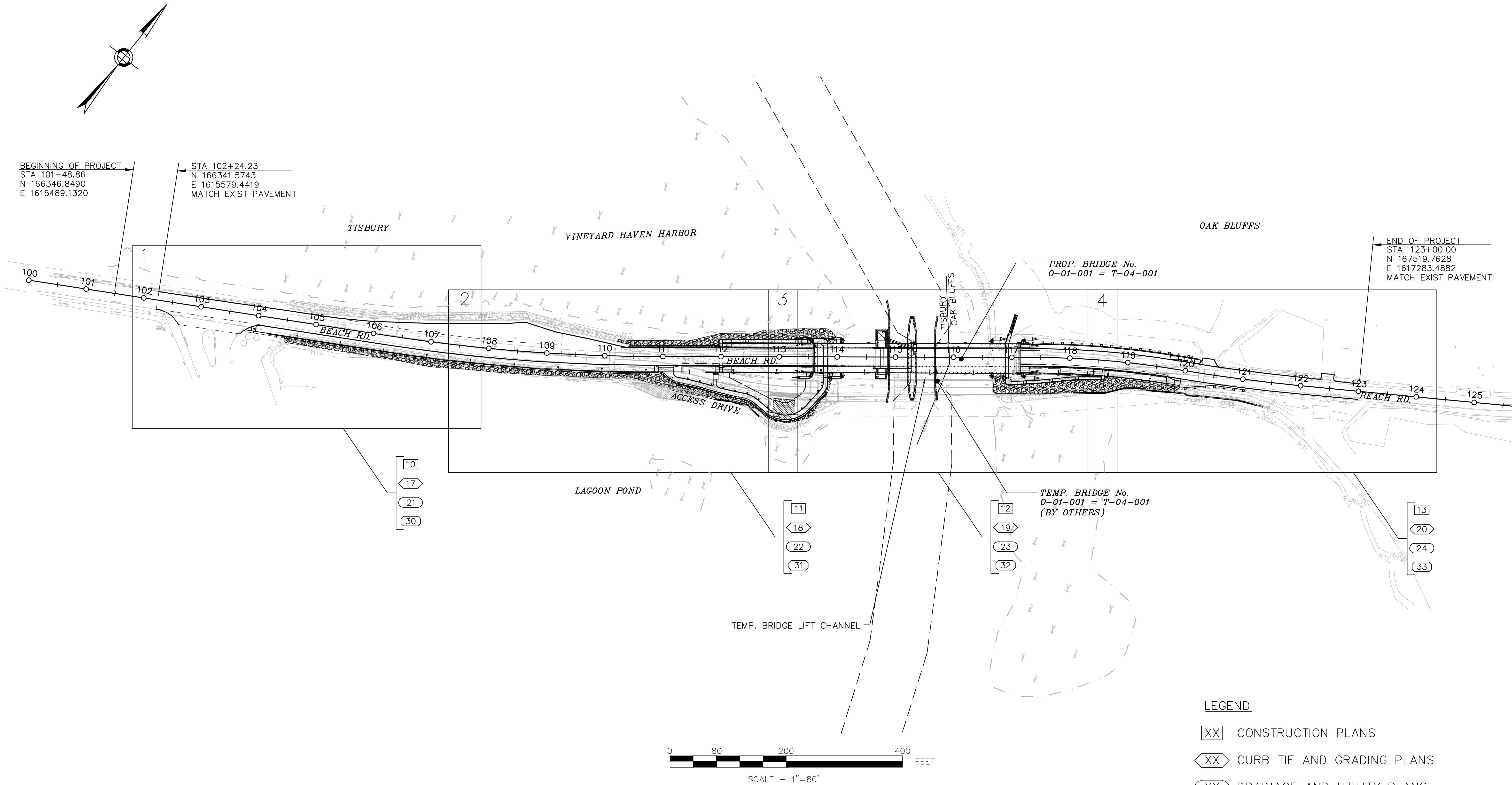
GENERAL NOTES

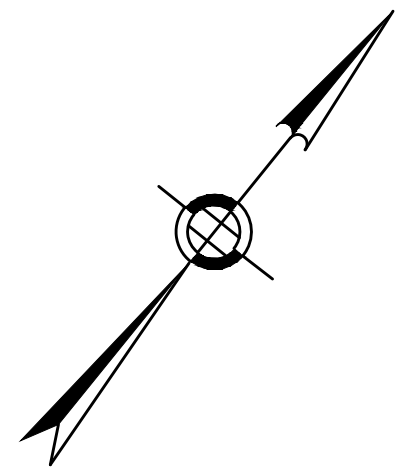
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES. CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY ELEVATIONS PRIOR TO CONSTRUCTION. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- ALL EXISTING SUBSURFACE UTILITY BOXES, GATES, MANHOLES ETC. WITHIN THE LIMITS OF THE PROPOSED PAVEMENT SHALL BE ADJUSTED TO THE FINISHED GRADE, UNLESS OTHERWISE NOTED ON THE PLANS. THERE ARE NO EXISTING UTILITIES ON THE TEMPORARY BRIDGE AND APPROACHES.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL RESTORE THE EXISTING SURFACE PAVEMENTS AND TURF DISTURBED BY THE PROPOSED WORK AND SHALL PATCH ALL HOLES RESULTING FROM THE REMOVAL OF FOUNDATIONS WITH MATERIALS SIMILAR TO THE EXISTING.
- ALL EXISTING GRANITE CURB, INCLUDING CURB INLETS AND CURB CORNERS, WITHIN THE PROJECT LIMITS, DEEMED SUITABLE FOR RE-USE BY THE ENGINEER, SHALL BE REMOVED AND RESET. CURB WHICH CANNOT BE RE-USED SHALL BE REMOVED AND DISPOSED WITH PAYMENT UNDER ITEM 120.1.
- THE CONTRACTOR SHALL PERFORM ALL SURVEY REQUIRED FOR THE LAYOUT OF PROPOSED CONSTRUCTION NO SEPARATE PAYMENT FOR THIS WORK WILL BE MADE.
- THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION WILL SUPPLY BENCHMARKS AND SURVEY TIES AS SHOWN ON THE PLAN.
- THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE THE IMPACTS TO PARKING AND ACCESS TO THE PROPERTIES ABUTTING BEACH ROAD THROUGHOUT CONSTRUCTION.
- THE CONTRACTOR SHALL PERFORM ITEMS OF WORK OUT OF NORMAL SEQUENCE AND SCHEDULE, AS DIRECTED BY THE ENGINEER, AS REQUIRED TO MEET THE OVERALL PROJECT SCHEDULE.
- ANY AND ALL TRAFFIC RELATED ITEMS REQUIRED TO MAINTAIN TRAFFIC FLOW THROUGH OR AROUND THE PROJECT AREA SHALL BE MAINTAINED IN A CONDITION ACCEPTABLE TO THE ENGINEER. FURTHER, THE CONTRACTOR SHALL REPLACE THOSE ITEMS AS SPECIFIED IN THE SPECIFICATIONS OR AS ORDERED BY THE ENGINEER.
- ALL CONSTRUCTION SIGNS IN PLACE BUT NOT PERTINENT TO THE ONGOING CONSTRUCTION PHASING SHALL BE BAGGED OR REMOVED.
- ALL PROPOSED WHEELCHAIR RAMPS ARE TO BE CEMENT CONCRETE AND SHALL CONFORM TO LATEST AAB AND ADA WHEELCHAIR RAMP STANDARDS.
- ALL PROPOSED GRANITE CURB SHALL BE TYPE VB.
- REMOVE AND RELAY RIPRAP PRIOR TO ANY WIDENING OF EMBANKMENT. EXISTING RIPRAP SHALL BE REMOVED WHEREVER PROPOSED WORK REQUIRES EXCAVATION WITHIN EXITING RIPRAP AND THEN RELAYED IN AREAS OF PROPOSED RIPRAP.
- DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT THE LOCATION OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE AND GRADE UP TO A DEPTH OF 5 FEET SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5 FEET WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.

OAK BLUFFS – TISBURY
BEACH ROAD OVER LAGOON POND

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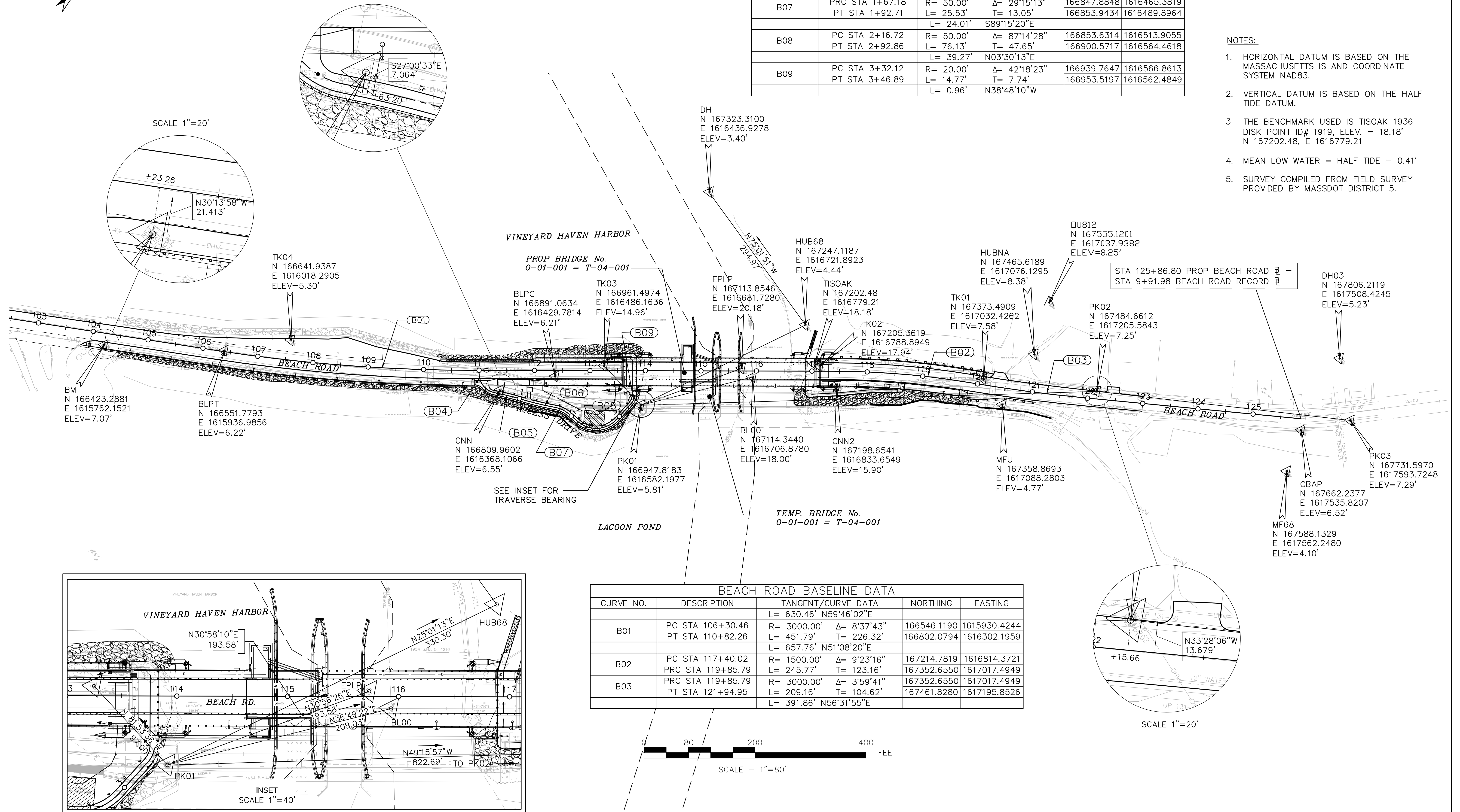
KEY PLAN





SCALE 1"=20'

SCALE 1"=20'

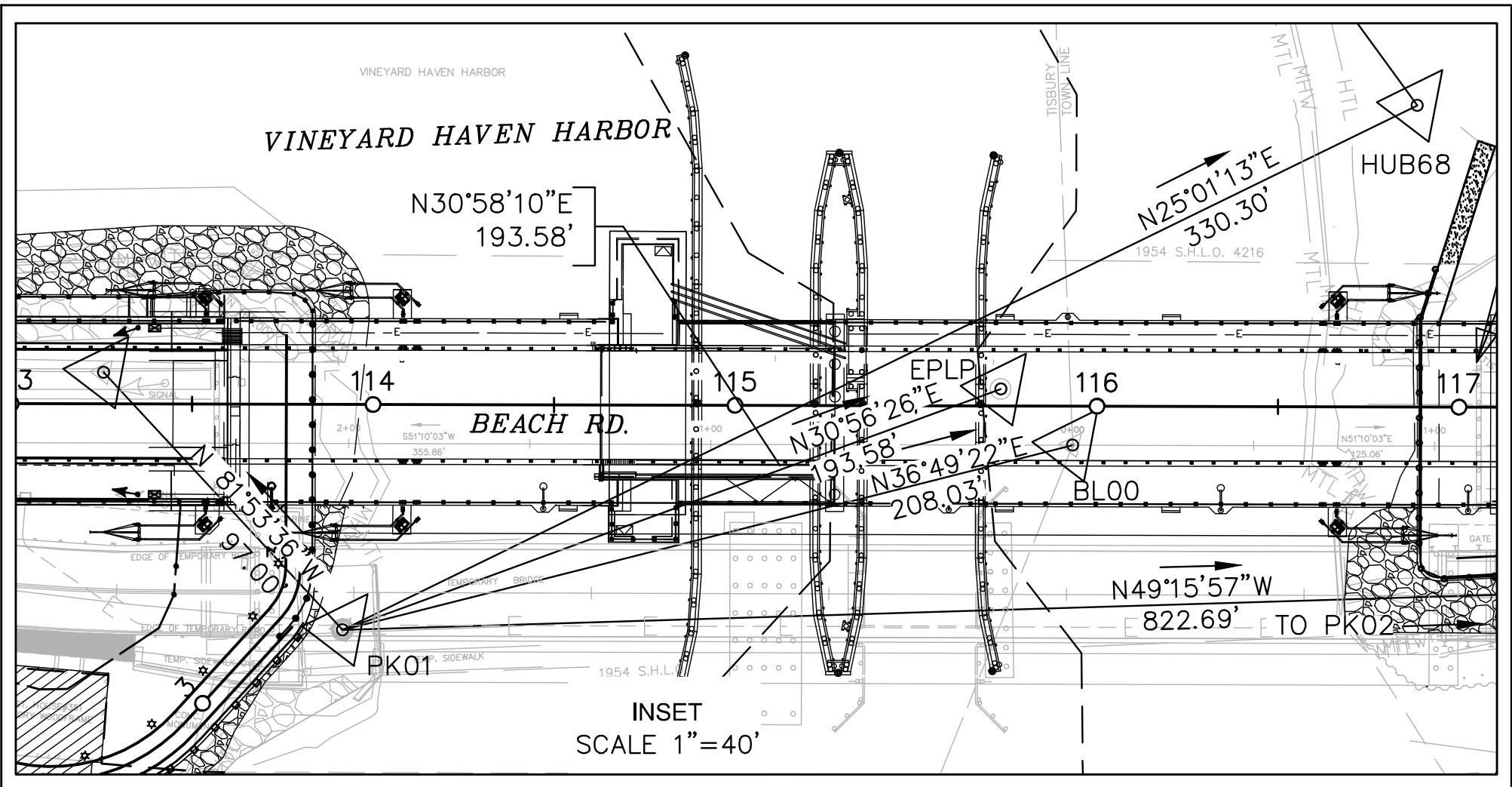
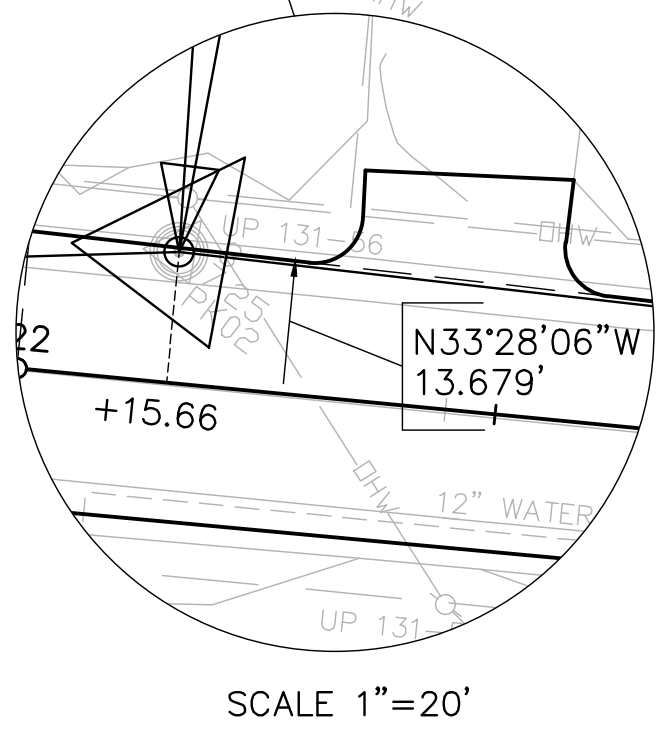
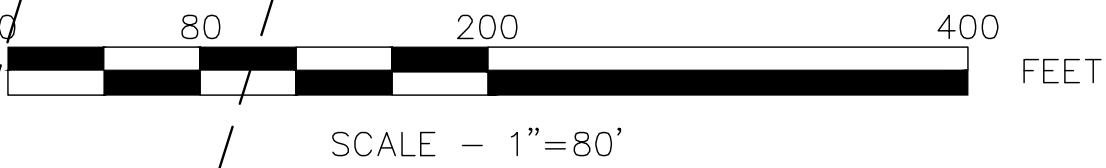


ACCESS DRIVE BASELINE DATA					
CURVE NO.	DESCRIPTION	TANGENT/CURVE DATA		NORTHING	EASTING
		L=	S		
B04	PC STA 0+06.02	R= 35.00'	Δ= 79°06'21"	166808.5289	1616319.7868
	PRC STA 0+54.34	L= 48.32'	T= 28.91'	166799.5766	1616363.4540
B05	PC STA 0+54.34	R= 530.00'	Δ= 05°30'52"	166799.5766	1616363.4540
	PRC STA 1+05.35	L= 51.01'	T= 25.52'	166821.2950	1616409.5873
B06	PC STA 1+05.35	R= 585.00'	Δ= 06°03'22"	166821.2950	1616409.5873
	PRC STA 1+67.18	L= 61.84'	T= 30.95'	166847.8848	1616465.3819
B07	PC STA 1+67.18	R= 50.00'	Δ= 29°15'13"	166847.8848	1616465.3819
	PT STA 1+92.71	L= 25.53'	T= 13.05'	166853.9434	1616489.8964
B08	PC STA 2+16.72	R= 50.00'	Δ= 87°14'28"	166853.6314	1616513.9055
	PT STA 2+92.86	L= 76.13'	T= 47.65'	166900.5717	1616564.4618
B09	PC STA 3+32.12	R= 20.00'	Δ= 42°18'23"	166939.7647	1616566.8613
	PT STA 3+46.89	L= 14.77'	T= 7.74'	166953.5197	1616562.4849

OAK BLUFFS — TISBURY			
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SURVEY CONTROL PLAN			

- NOTES:
- HORIZONTAL DATUM IS BASED ON THE MASSACHUSETTS ISLAND COORDINATE SYSTEM NAD83.
 - VERTICAL DATUM IS BASED ON THE HALF TIDE DATUM.
 - THE BENCHMARK USED IS TISOAK 1936 DISK POINT ID# 1919, ELEV. = 18.18' N 167202.48, E 1616779.21
 - MEAN LOW WATER = HALF TIDE — 0.41'
 - SURVEY COMPILED FROM FIELD SURVEY PROVIDED BY MASSDOT DISTRICT 5.

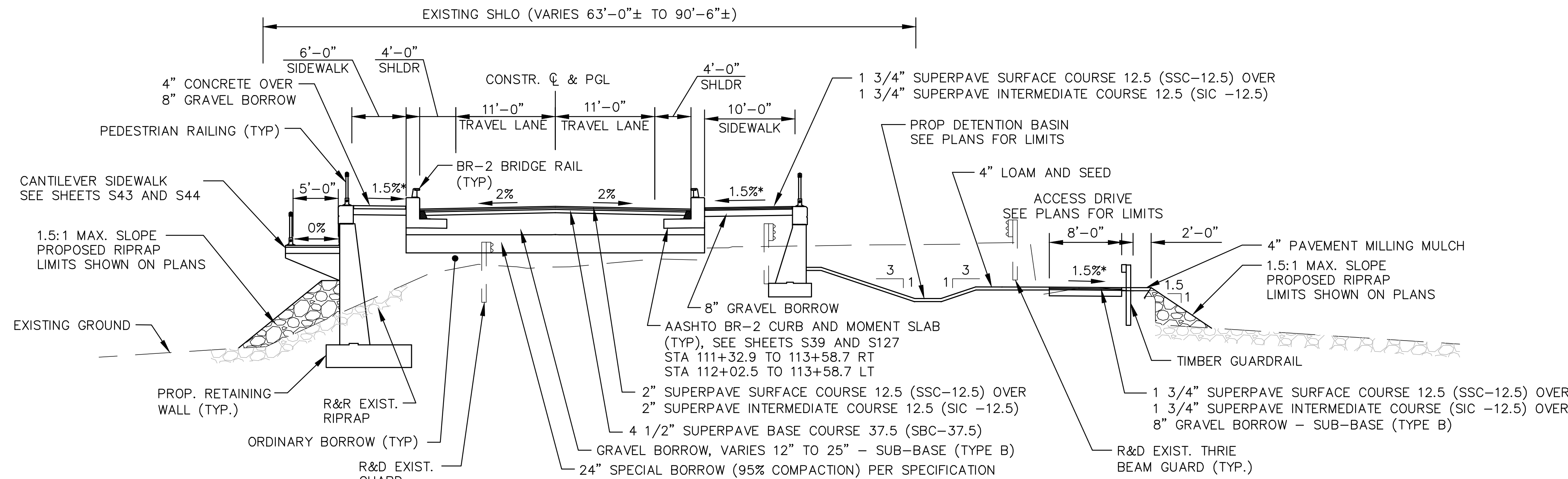
BEACH ROAD BASELINE DATA				
CURVE NO.	DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
B01		L= 630.46' N59°46'02"E		
	PC STA 106+30.46	R= 3000.00' Δ= 8°37'43"	166546.1190	1615930.4244
	PT STA 110+82.26	L= 451.79' T= 226.32'	166802.0794	1616302.1959
		L= 657.76' N51°08'20"E		
B02	PC STA 117+40.02	R= 1500.00' Δ= 9°23'16"	167214.7819	1616814.3721
	PRC STA 119+85.79	L= 245.77' T= 123.16'	167352.6550	1617017.4949
B03	PRC STA 119+85.79	R= 3000.00' Δ= 3°59'41"	167352.6550	1617017.4949
	PT STA 121+94.95	L= 209.16' T= 104.62'	167461.8280	1617195.8526
		L= 391.86' N56°31'55"E		



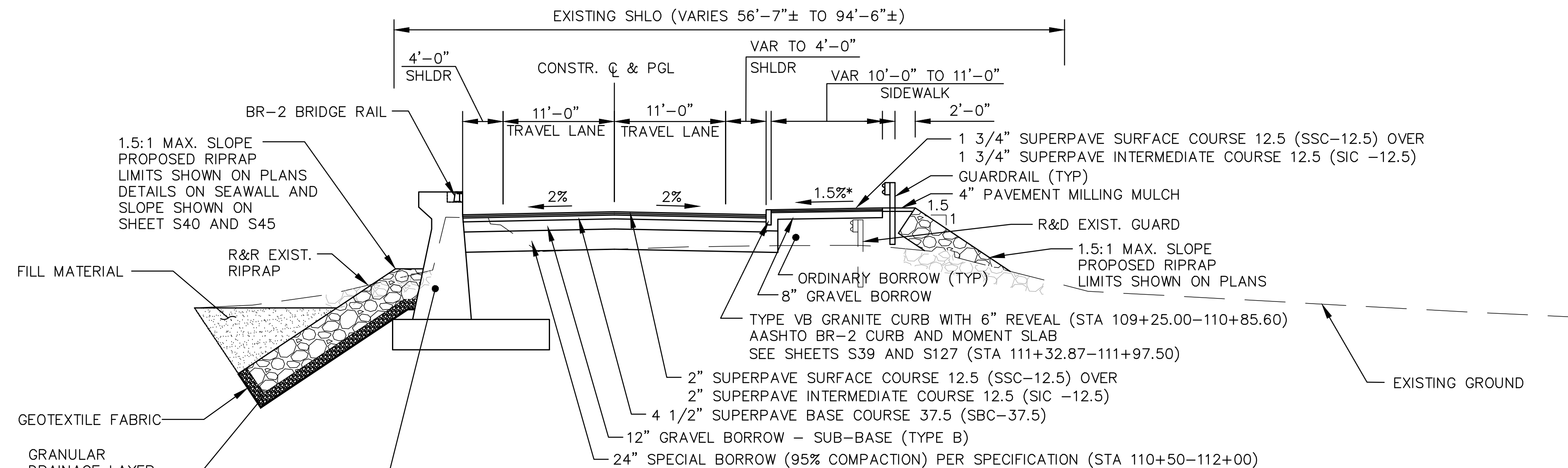
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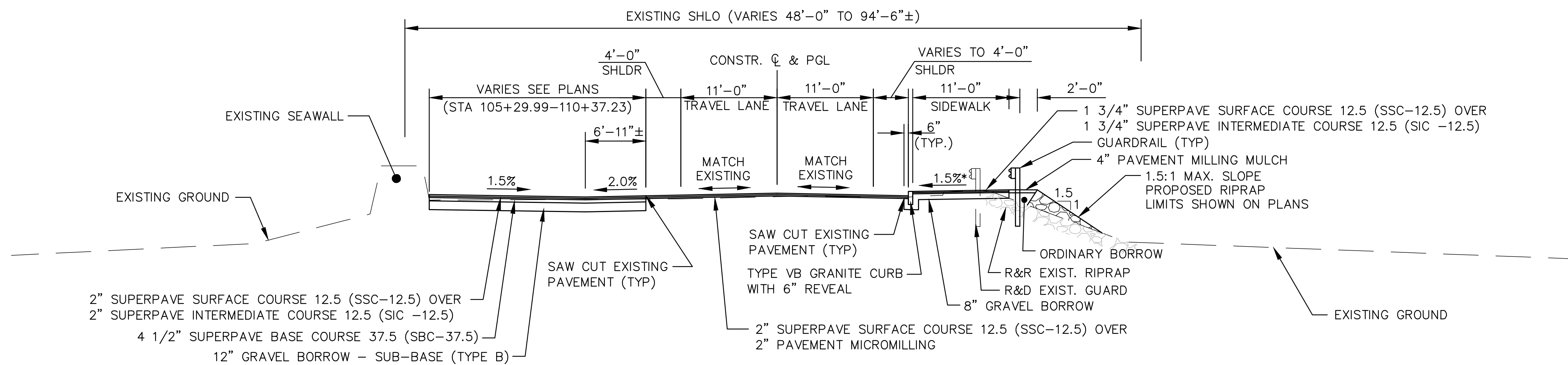
TYPICAL SECTIONS



TYPICAL TWO LANE SECTION
STA 112+00 TO STA 113+58.73



TYPICAL TWO LANE SECTION
STA 109+25 TO STA 112+00



TYPICAL TWO LANE SECTION
STA 102+24.23 TO STA 109+25

PAVEMENT NOTES:

FULL DEPTH PAVEMENT:

2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC -12.5) OVER
4 1/2" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) OVER
12" GRAVEL BORROW - SUB-BASE (TYPE B) OVER
24" SPECIAL BORROW (95% COMPACTION) PER SPECIFICATION

PAVEMENT RESURFACING OVERLAY

2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
2" PAVEMENT MICROMILLING

10'-0" TO 11'-0" SIDEWALK

1 3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
1 3/4" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC -12.5) OVER
8" GRAVEL BORROW - SUB-BASE (TYPE B)
* ± 0.5% CONSTRUCTION TOLERANCE

6'-0" TO 7'-0" SIDEWALK

4" CONCRETE OVER
8" GRAVEL BORROW - SUB-BASE (TYPE B)
* ± 0.5% CONSTRUCTION TOLERANCE

WHEELCHAIR RAMPS

4" CONCRETE OVER
8" GRAVEL BORROW - SUB-BASE (TYPE B)

WALKWAY

3 1/2" HMA WALK SURFACE OVER
8" GRAVEL BORROW - SUB-BASE (TYPE B)
* ± 0.5% CONSTRUCTION TOLERANCE

ACCESS DRIVEWAY

1 3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
1 3/4" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC -12.5) OVER
8" GRAVEL BORROW - SUB-BASE (TYPE B)

TEMPORARY ROADWAY WIDENING

1 3/4" HMA SURFACE COURSE OVER
1 3/4" HMA INTERMEDIATE COURSE BINDER OVER
12" GRAVEL BORROW - SUB BASE (TYPE B)

ASPHALT EMULSION TACK COAT SHALL BE APPLIED AT THE RATE OF
0.05 GAL/SY TO SMOOTH PAVED SURFACES AND
0.07 GAL/SY TO MILLED SURFACES

HMA JOINT SEALANT SHALL BE APPLIED IN ACCORDANCE WITH
STANDARD SPECIFICATION 453. SEALER SHALL BE APPLIED TO
EDGING, CURB AND BERM, CASTINGS AND PAVEMENT JOINTS PRIOR
TO PAVING AGAINST.

PERMANENT TRENCH PATCHING

2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
6.75" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) COMPACTED
IN 3 EQUAL LIFTS OVER
12" GRAVEL BORROW - SUB-BASE (TYPE B)

TEMPORARY TRENCH PATCHING

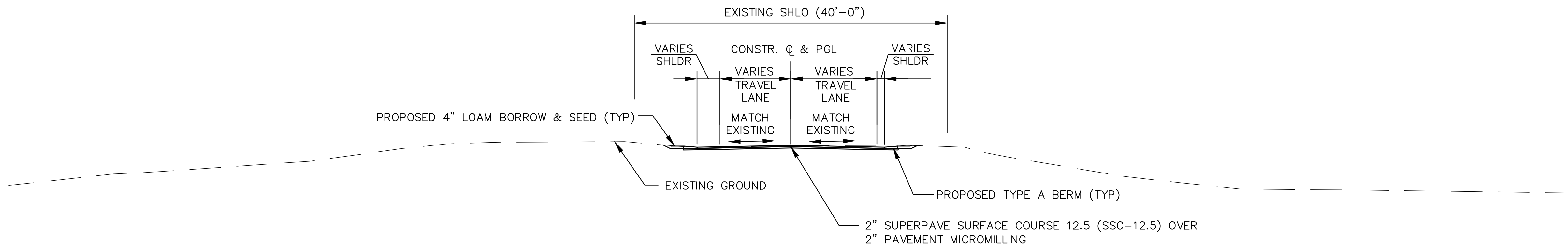
3" HMA SURFACE COURSE FLUSH WITH EXISTING PAVEMENT

OAK BLUFFS – TISBURY
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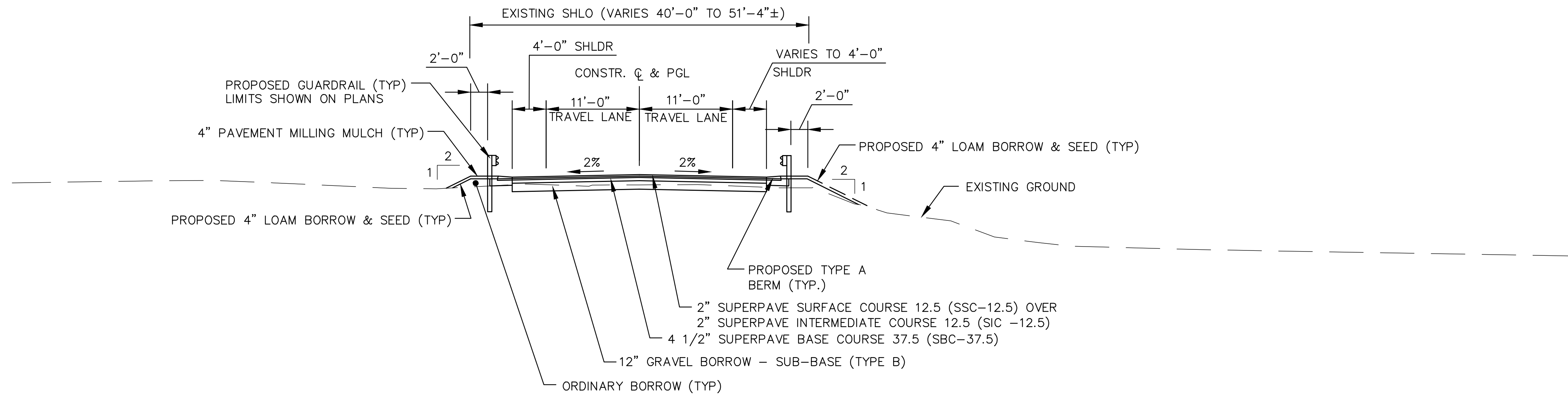
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TYPICAL SECTIONS

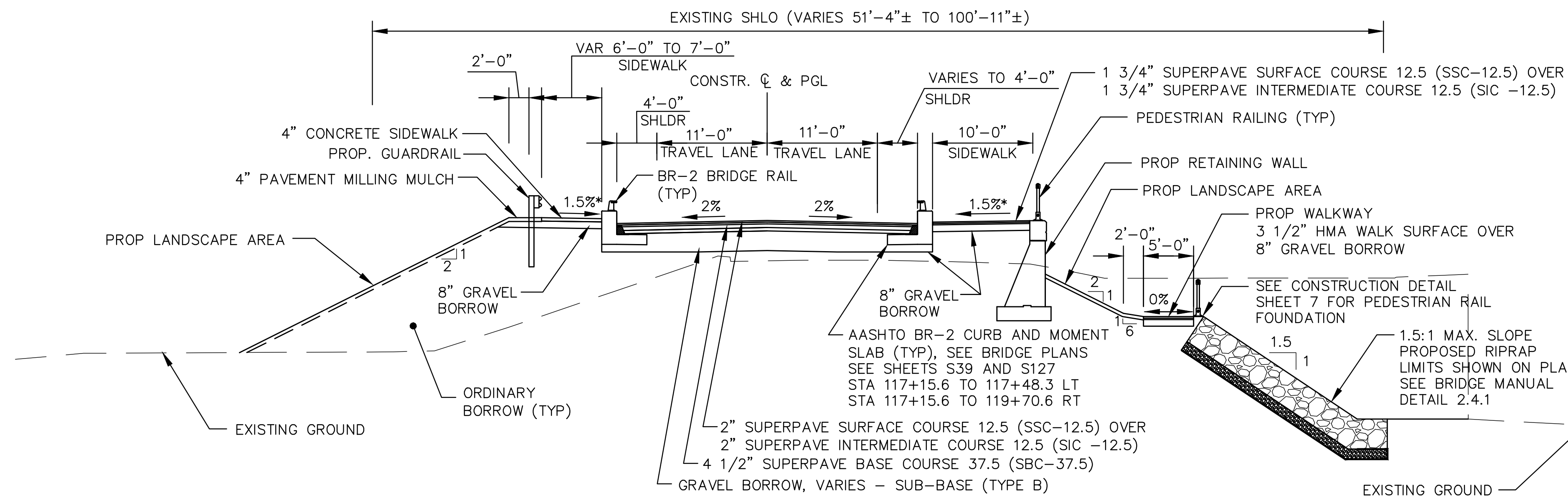
SEE PAVEMENT NOTES ON SHEET 5



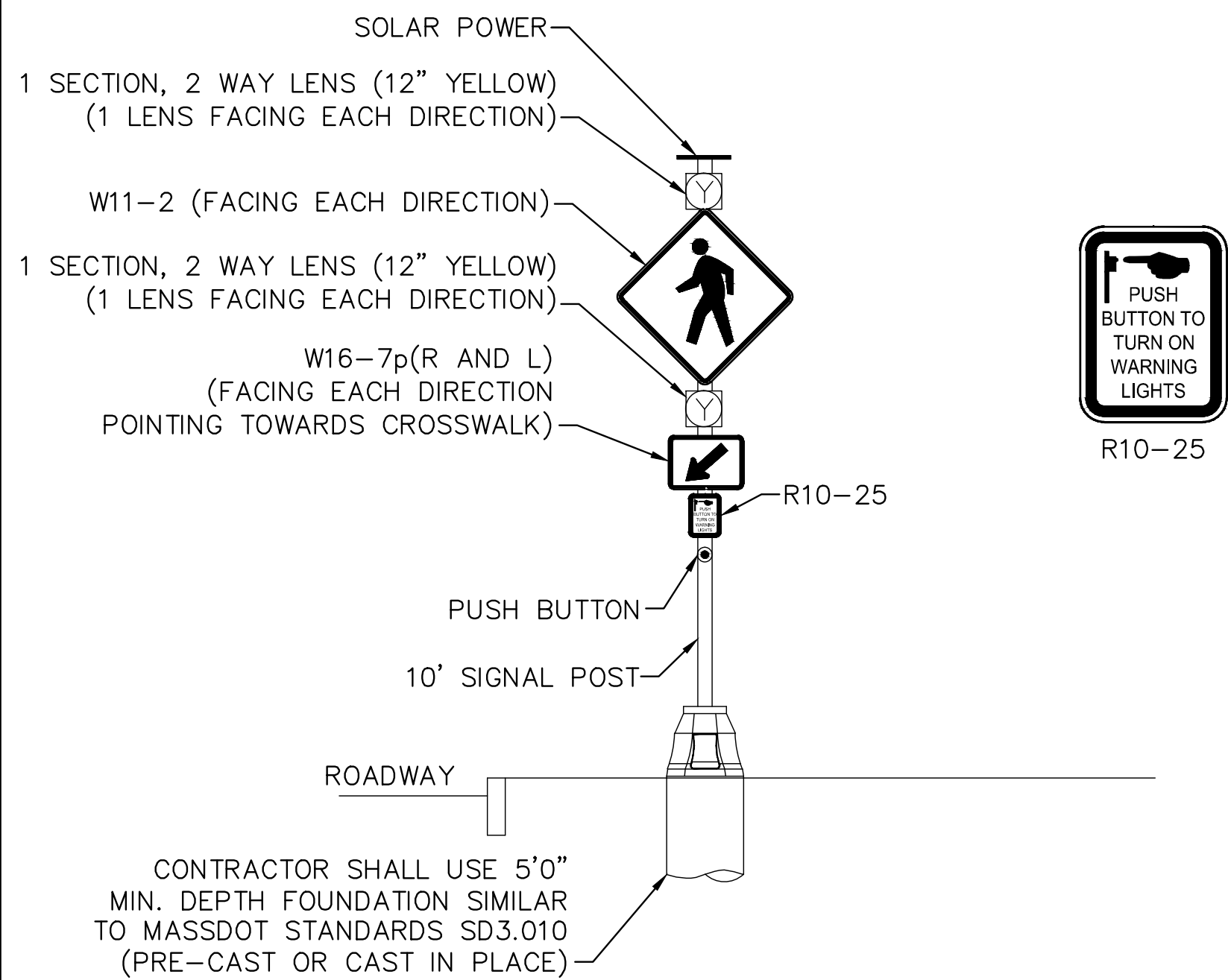
TYPICAL TWO LANE SECTION
STA 122+00 TO STA 123+00



TYPICAL TWO LANE SECTION
STA 120+25 TO STA 122+00

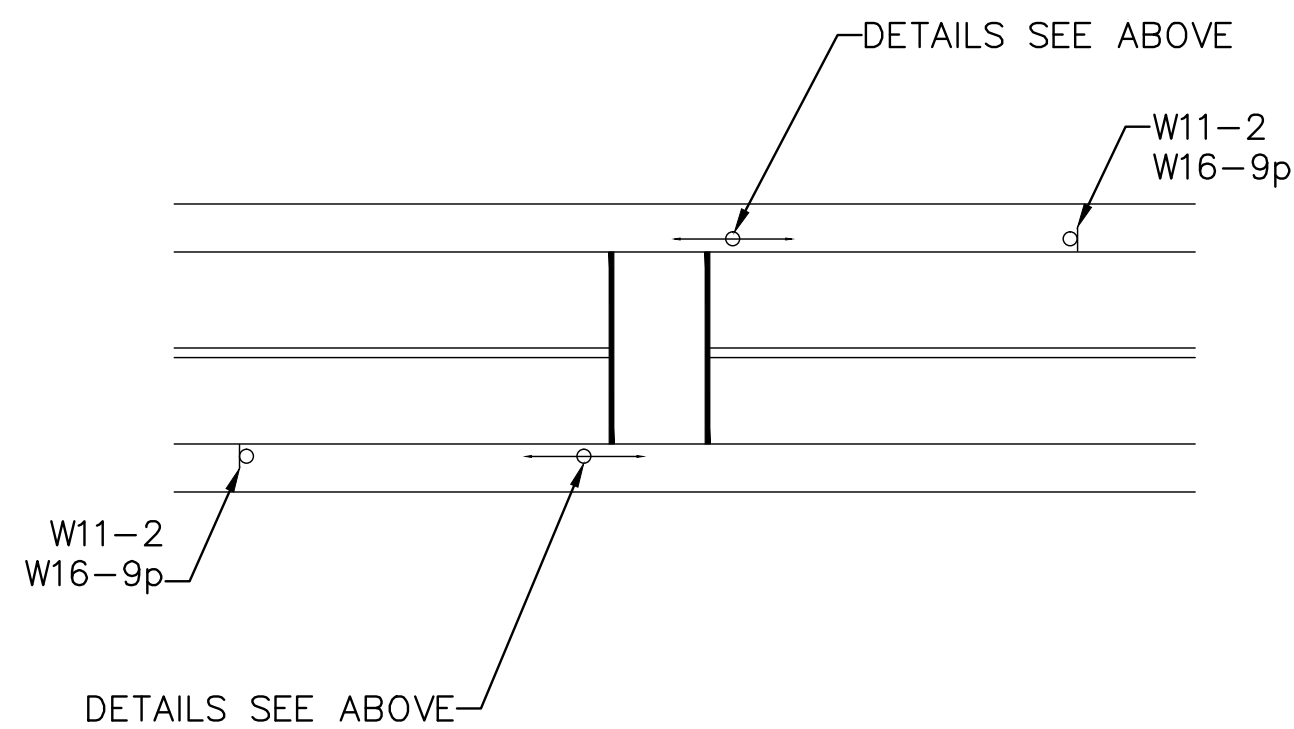


TYPICAL TWO LANE SECTION
STA 117+15.56 TO STA 120+25

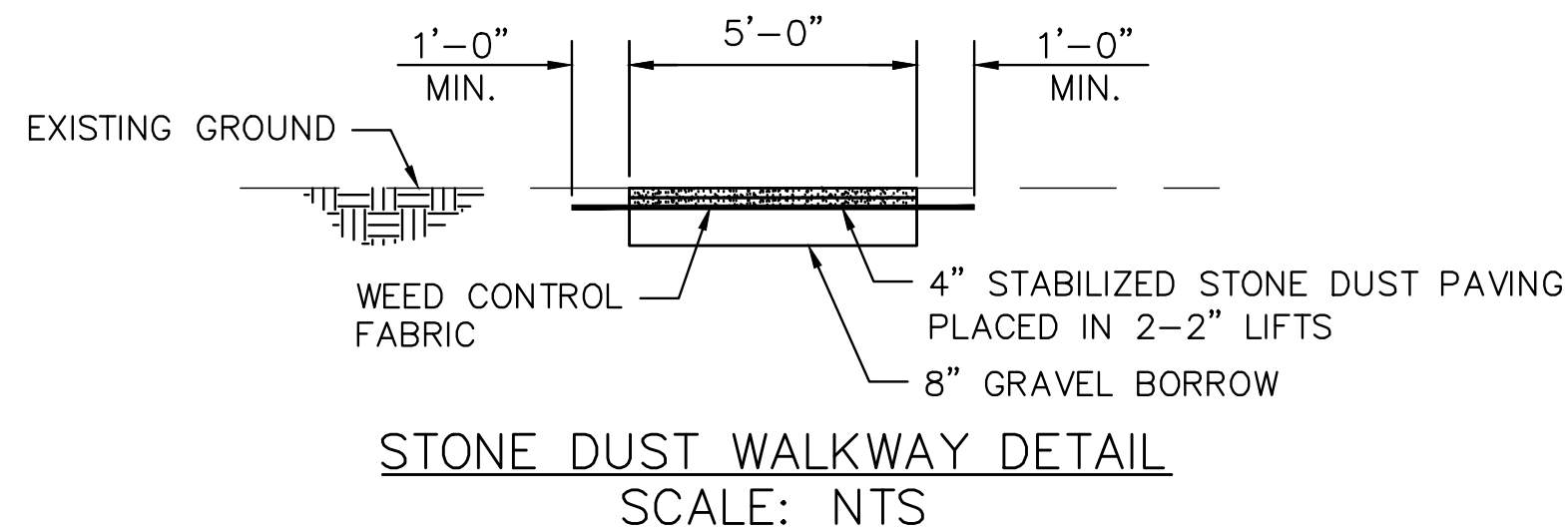


NOTES:

1. DETECTION TYPE SHALL BE PUSH BUTTON.
2. THE BEACON SHALL PROVIDE FLASHING OPERATION UPON ACTUATION.
3. CONTROLLER SHALL BE POLE MOUNTED AND WIRELESS COMMUNICATION BETWEEN EACH FLASHING BEACON.
4. FLASHING OPERATIONS SHALL COMPLY WITH SECTION 4K OF THE MUTCD.
5. POWER SOURCE SHALL BE SOLAR POWER WITH BATTERY BACK UP.



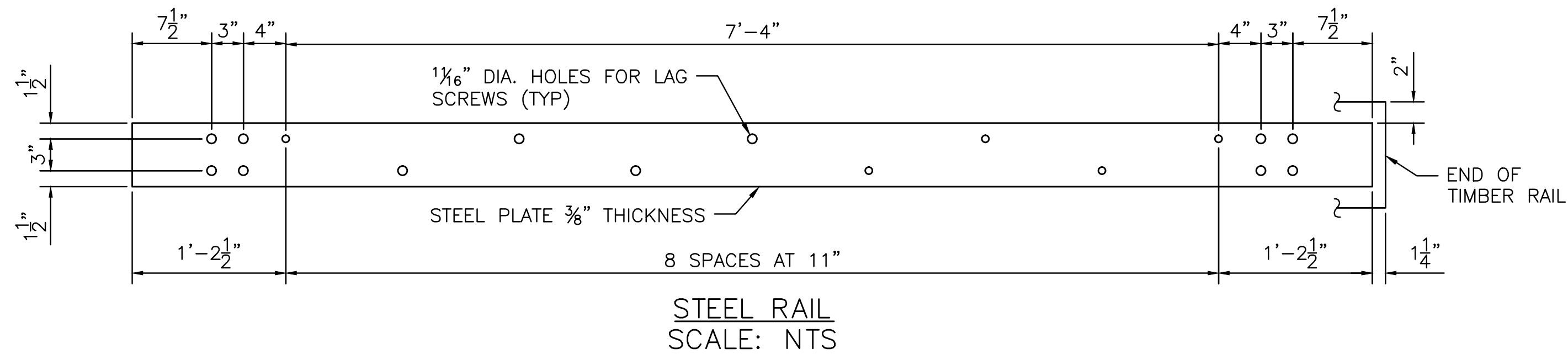
PEDESTRIAN CROSSWALK WITH FLASHING BEACON
SCALE: NTS



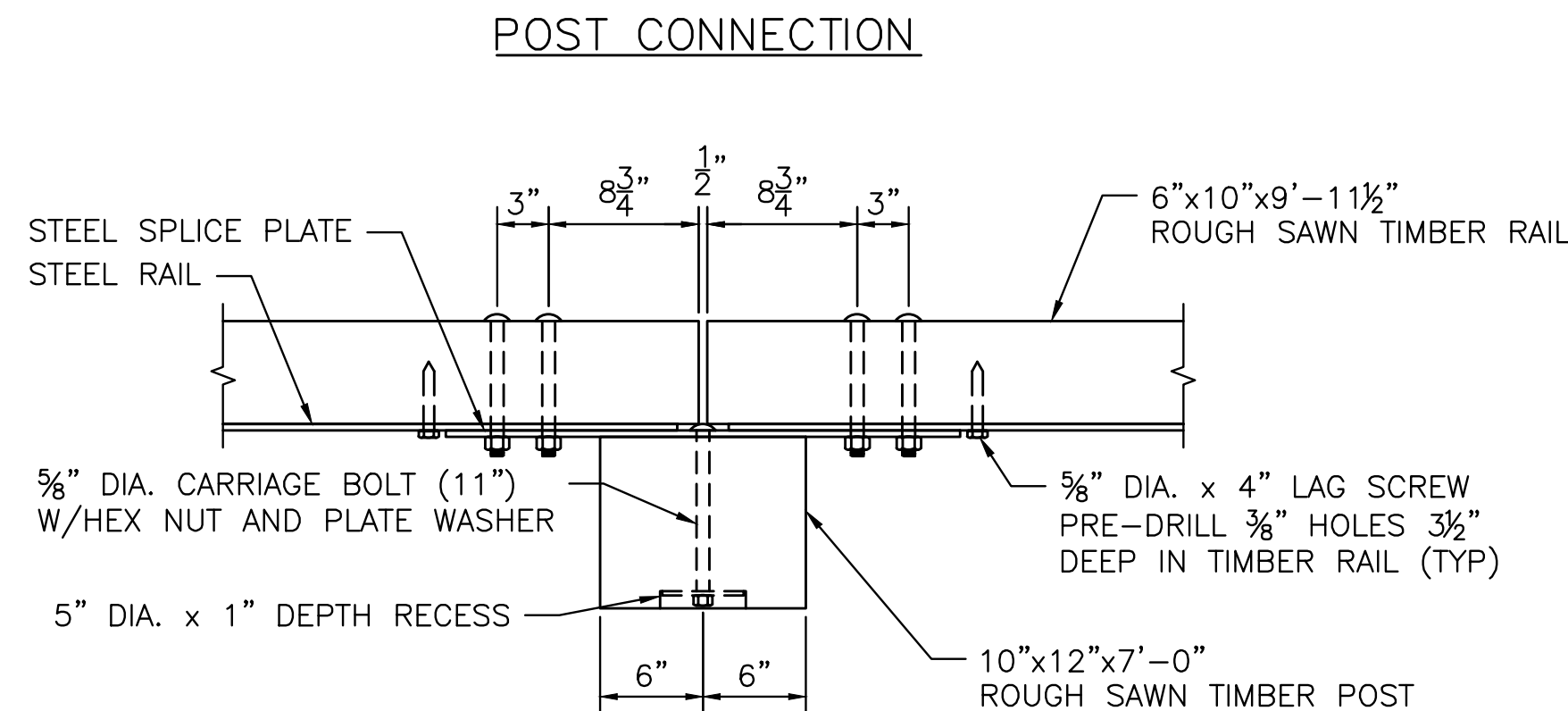
STONE DUST WALKWAY DETAIL
SCALE: NTS



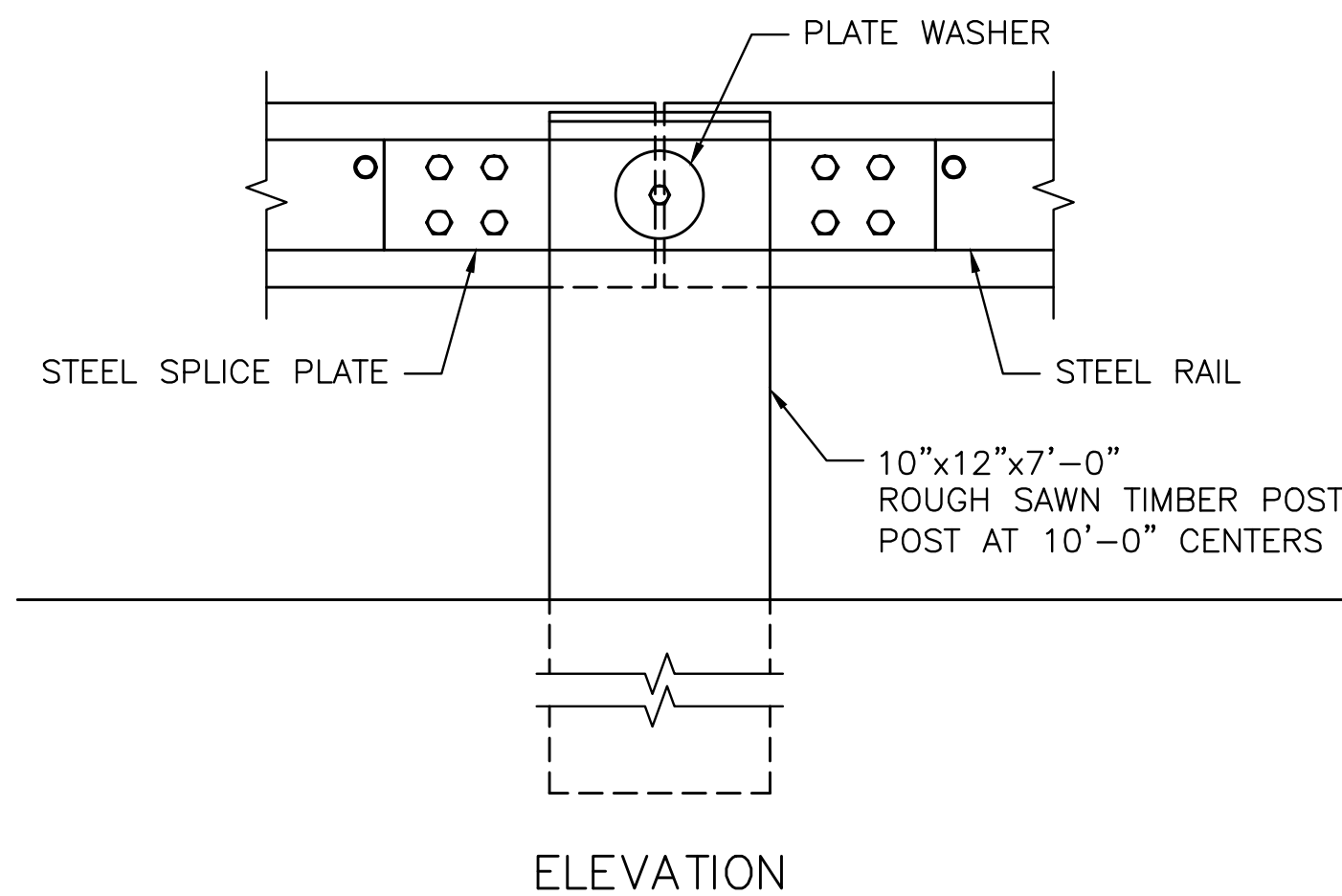
R10-25



STEEL RAIL
SCALE: NTS



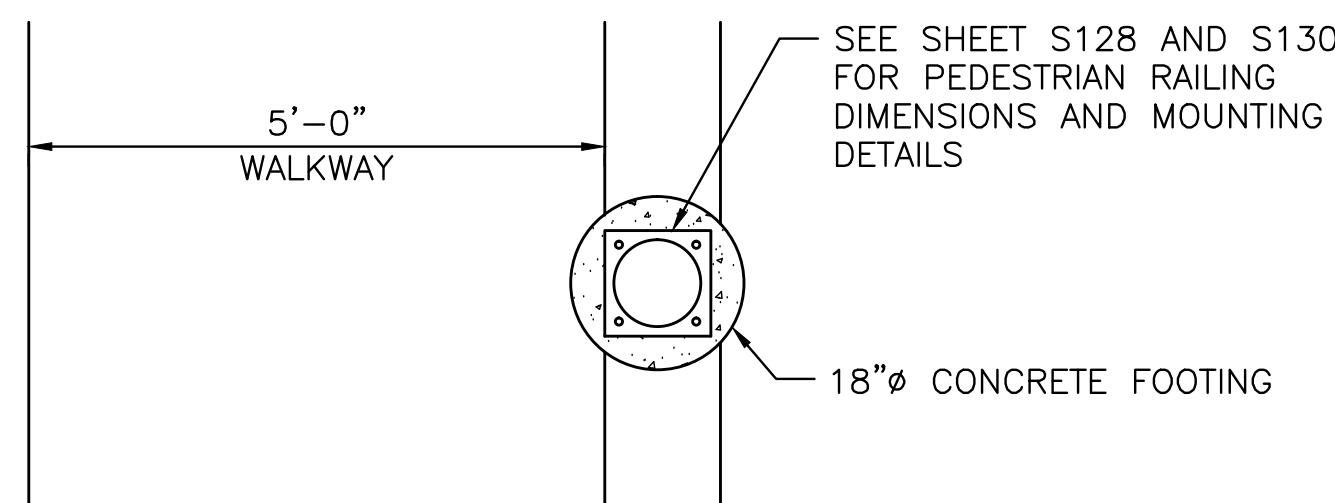
PLAN



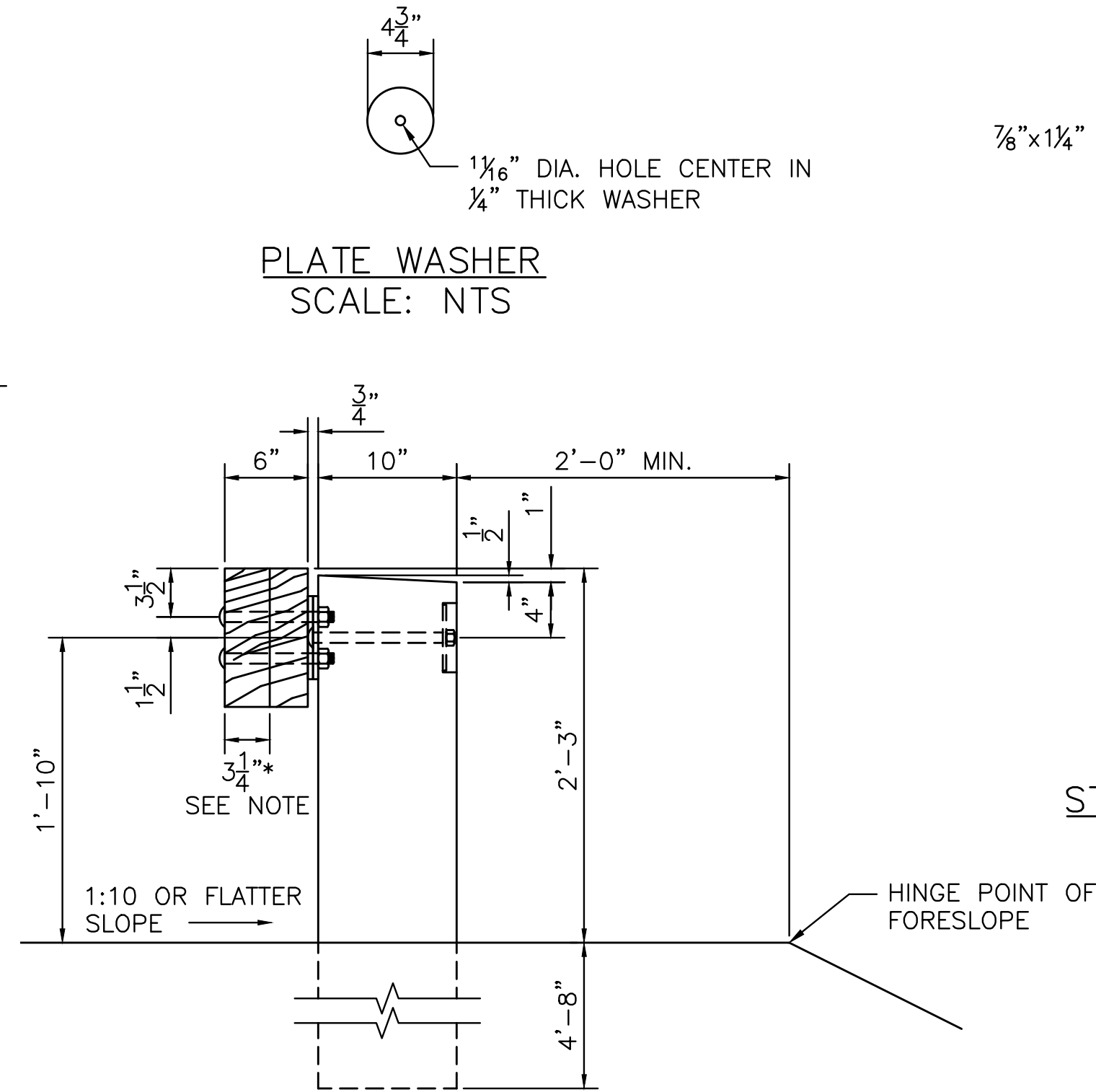
ELEVATION

NOTES:

1. USE WEATHERING STEEL FOR ALL STRUCTURAL STEEL AND FASTENER HARDWARE AS SPECIFIED.

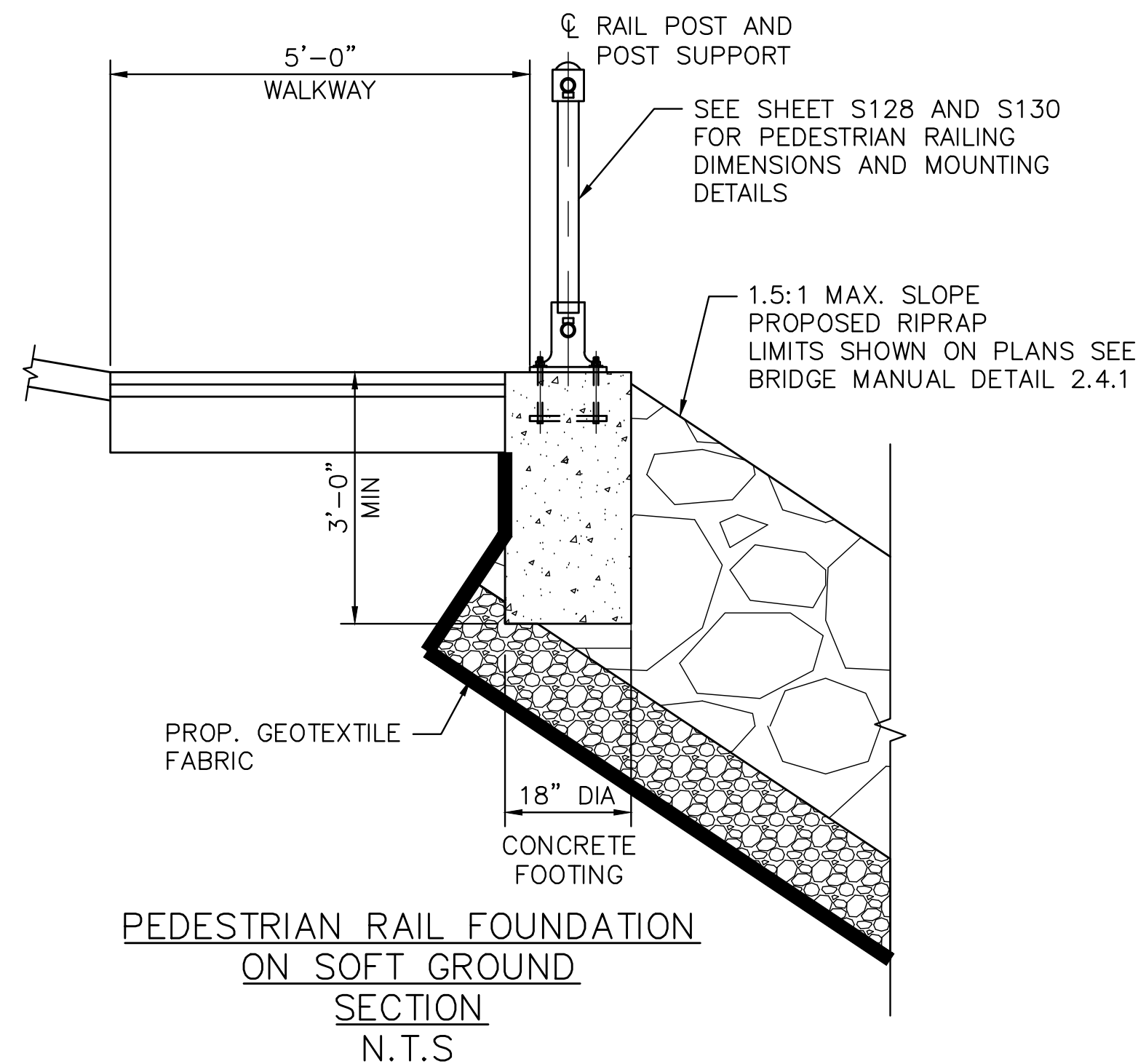


PEDESTRIAN RAIL FOUNDATION
ON SOFT GROUND
PLAN
N.T.S



NOTE: A 3/4\"/>

TYPICAL GUARDRAIL CROSS SECTION
SCALE: NTS



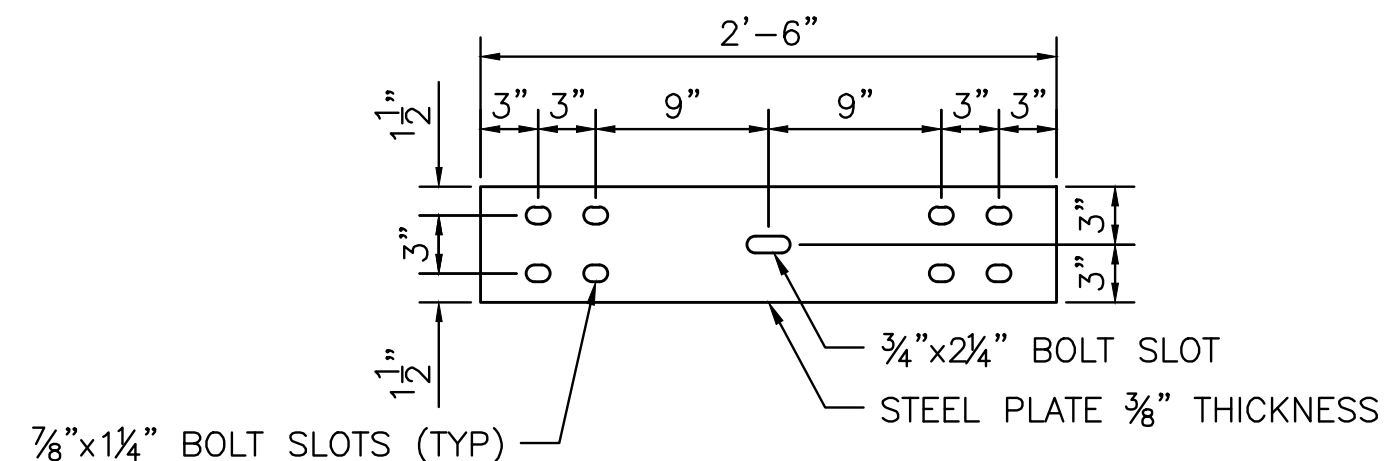
PEDESTRIAN RAIL FOUNDATION
ON SOFT GROUND
SECTION
N.T.S

OAK BLUFFS - TISBURY
BEACH ROAD OVER LAGOON POND

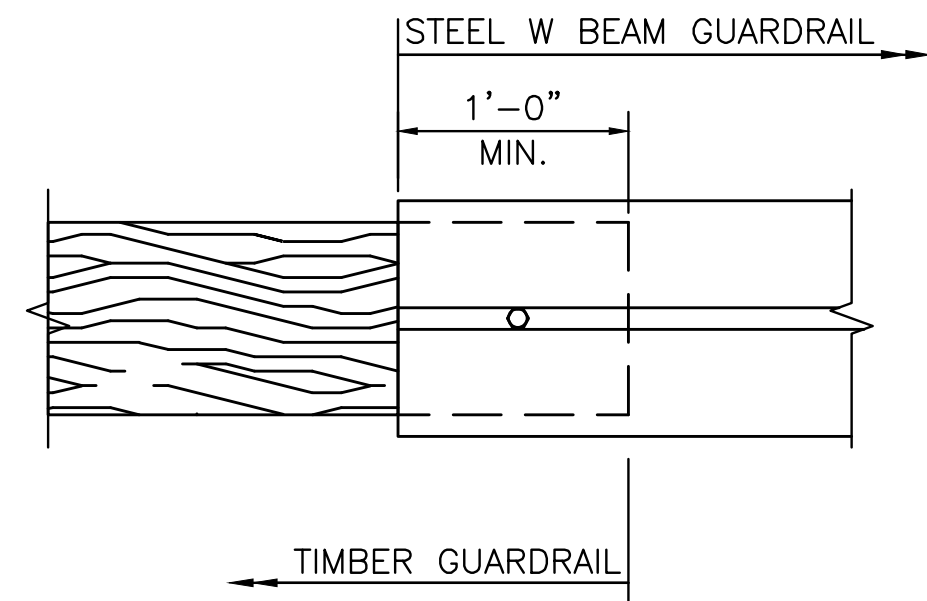
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	7	254

PROJECT FILE NO.: 604029

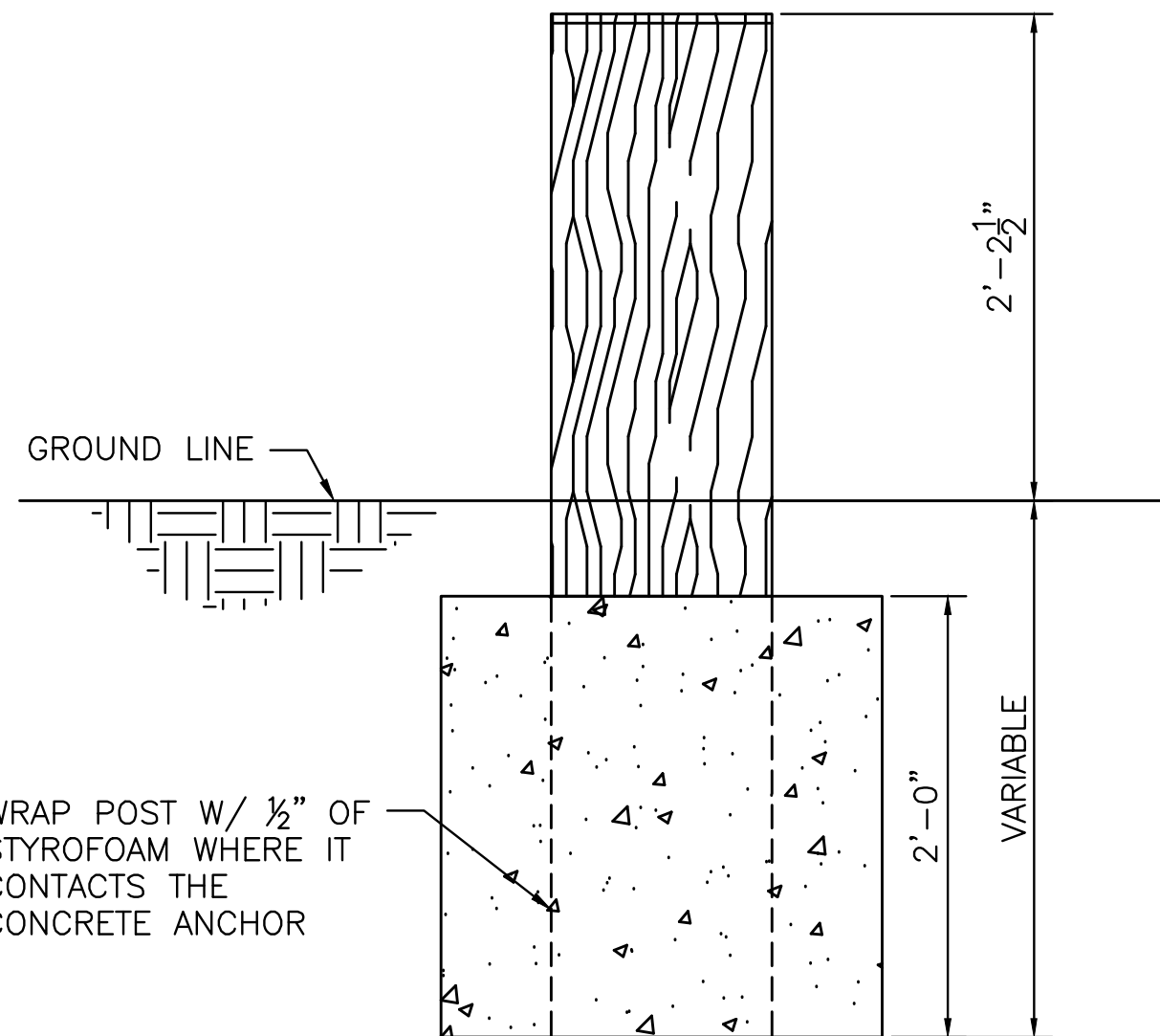
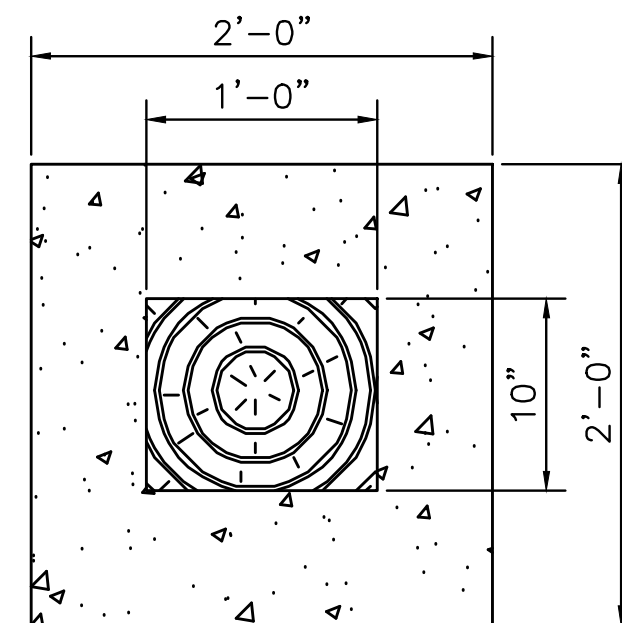
CONSTRUCTION DETAILS



STEEL SPLICE PLATE
SCALE: NTS



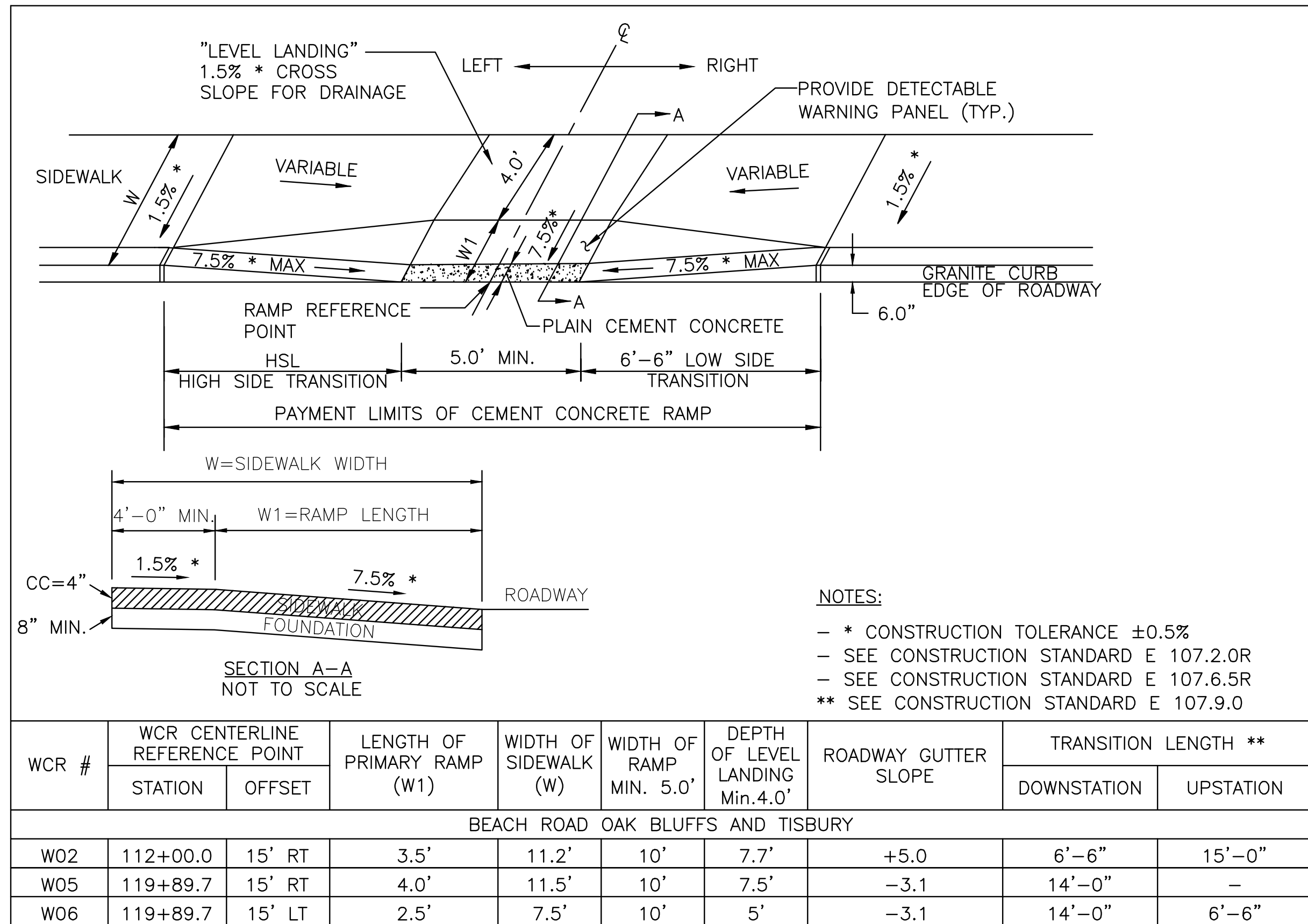
STEEL W BEAM GUARDRAIL TO TIMBER GUARDRAIL
CONNECTION DETAIL
SCALE: NTS



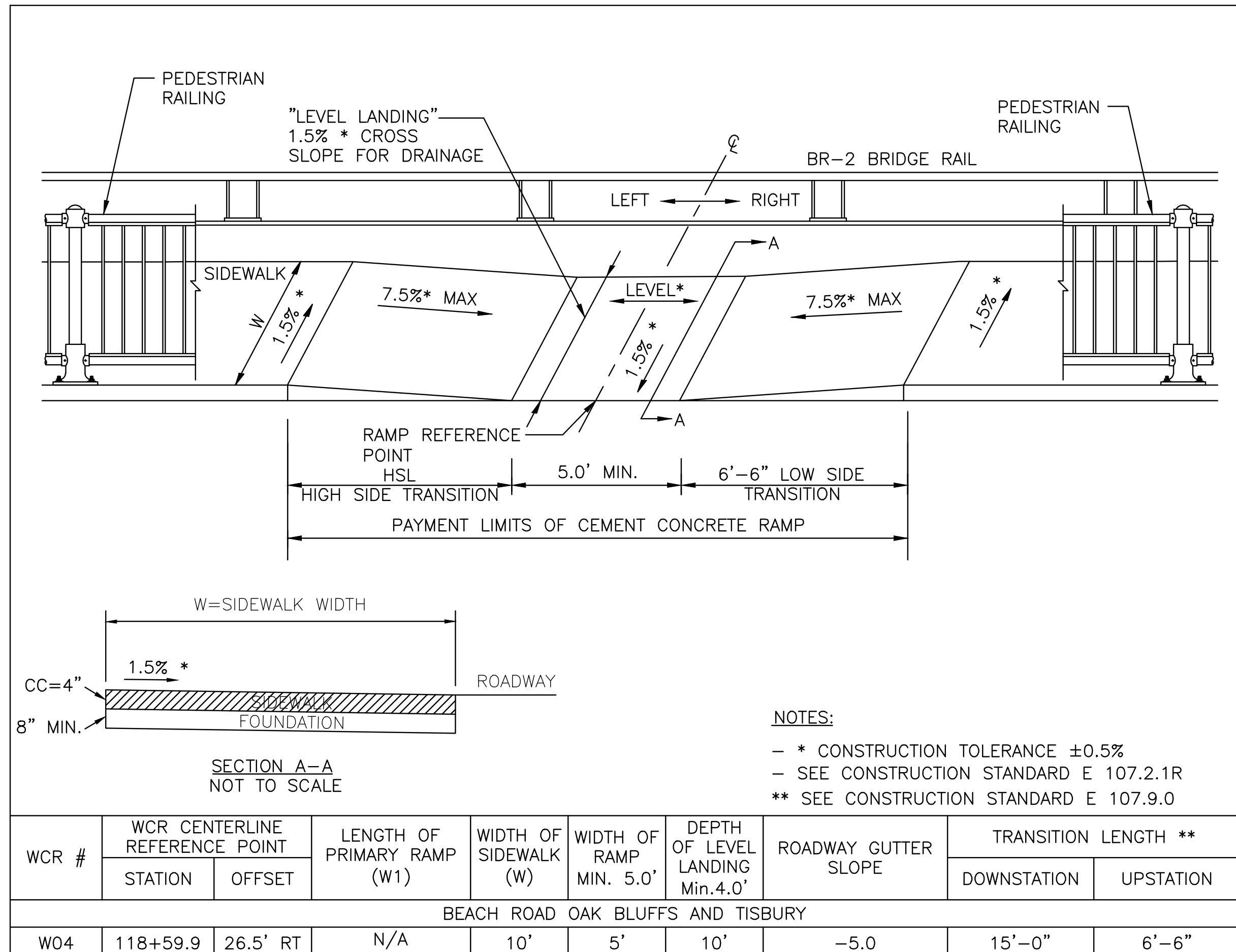
24\"/>

CONCRETE ANCHOR FOR
SHORT GUARDRAIL POST
SCALE: NTS

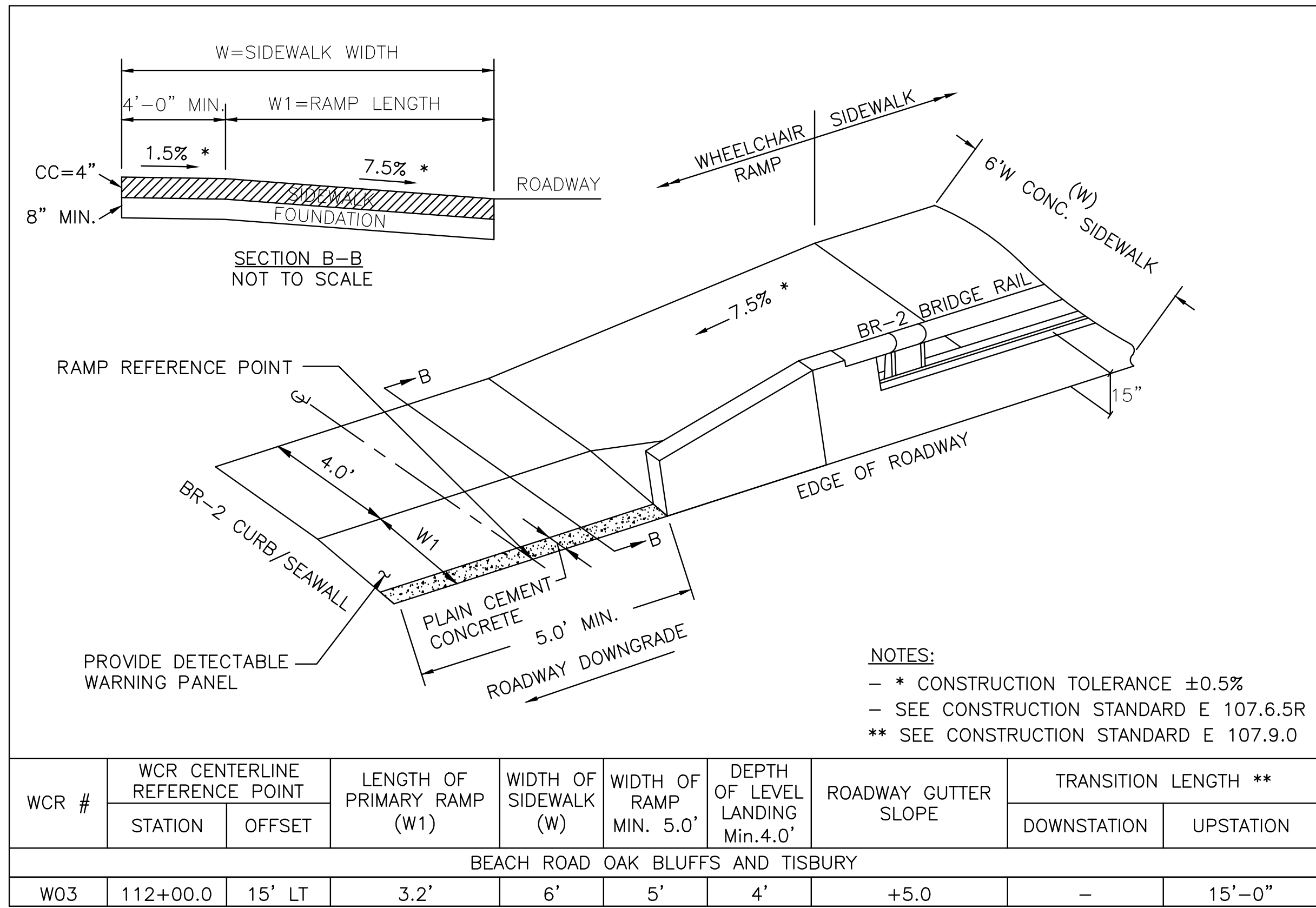
WHEELCHAIR RAMPS – STYLE "A"



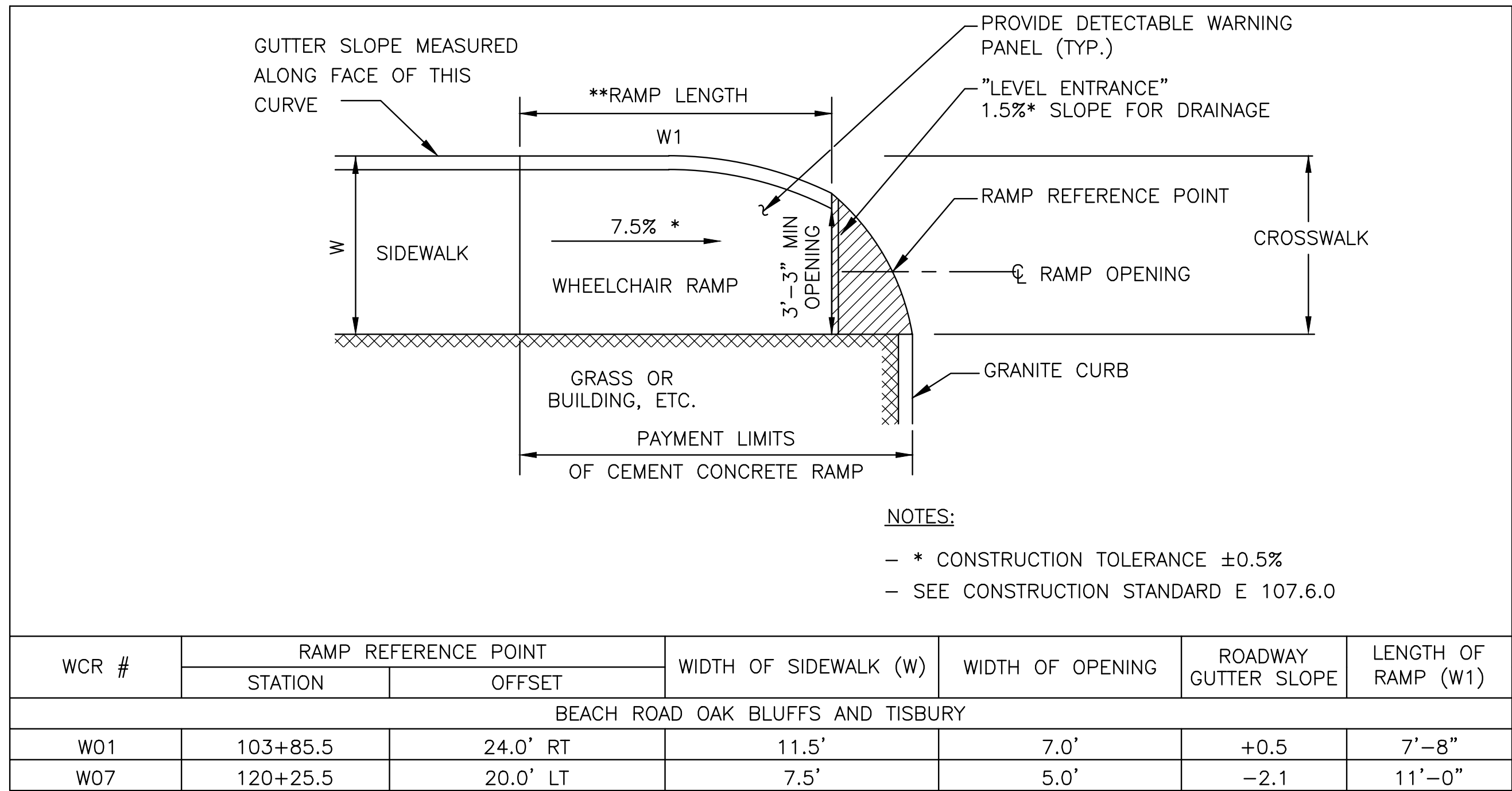
WHEELCHAIR RAMPS – STYLE "C"



WHEELCHAIR RAMPS – STYLE "B"



WHEELCHAIR RAMPS – STYLE "D"



NOTES:

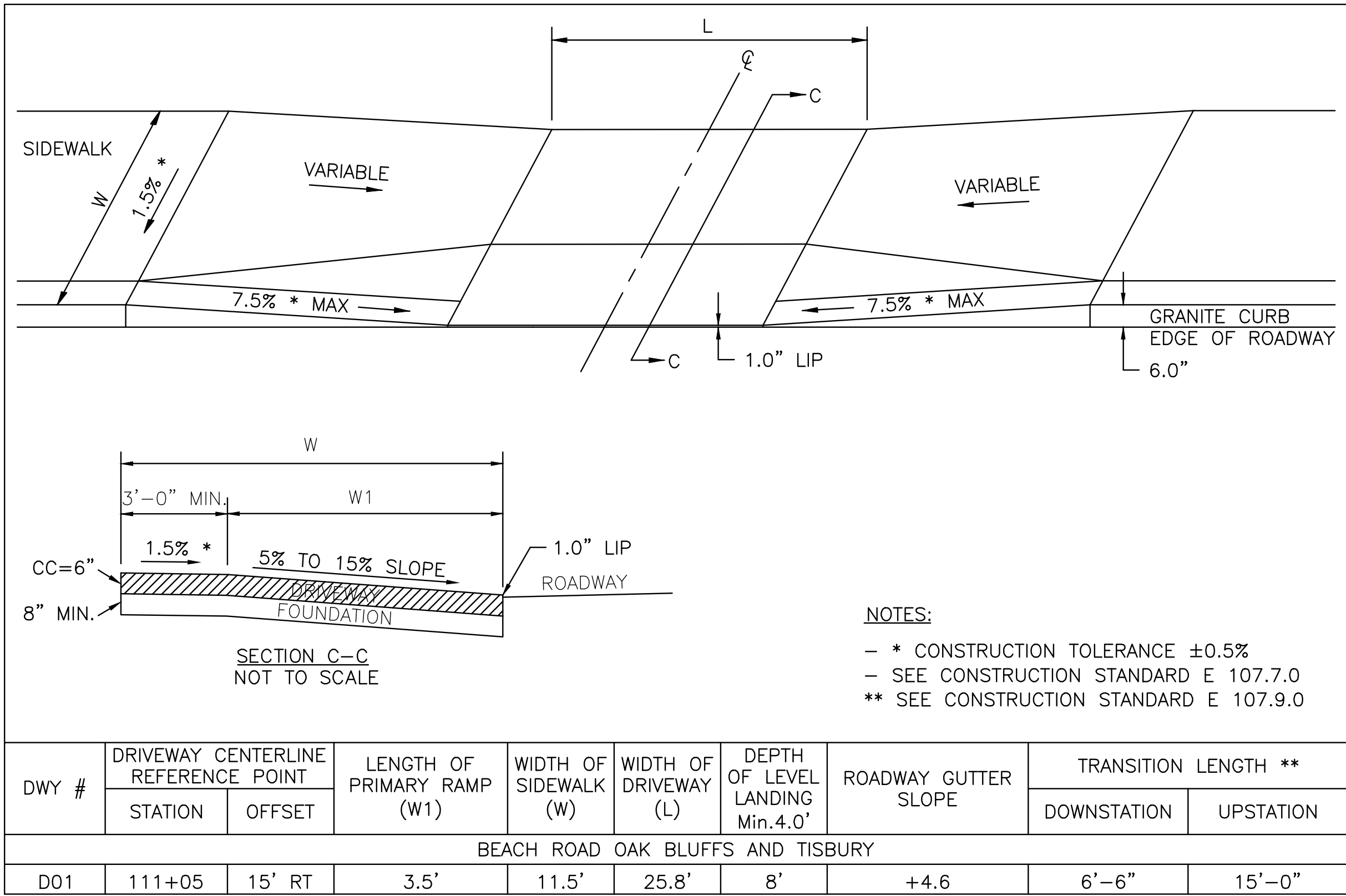
- WHEELCHAIR RAMPS ARE TO BE CEMENT CONCRETE.
- CONCRETE RAMPS ARE TO BE TEXTURED BY GROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.
- WHEELCHAIR RAMPS ARE TO BE CONSTRUCTED ACCORDING TO THE LATEST AAB RULES AND REGULATIONS, AND THE MARCH 2012 CONSTRUCTION STANDARD DETAILS.
- SEE TYPICAL SECTIONS AND PAVEMENT NOTES PLAN FOR DEPTHS OF SURFACE COURSE AND FOUNDATION.
- SEE CURB TIE AND GRADING PLANS FOR STATION LOCATION.
- ALL WHEELCHAIR RAMPS SHALL HAVE DETECTABLE WARNING PANELS AS SHOWN ON E 107.6.5R.

OAK BLUFFS – TISBURY BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	8	254
PROJECT FILE NO.: 604029			

DRIVEWAY & WHEELCHAIR RAMP DETAILS

DRIVEWAY AT SIDEWALK

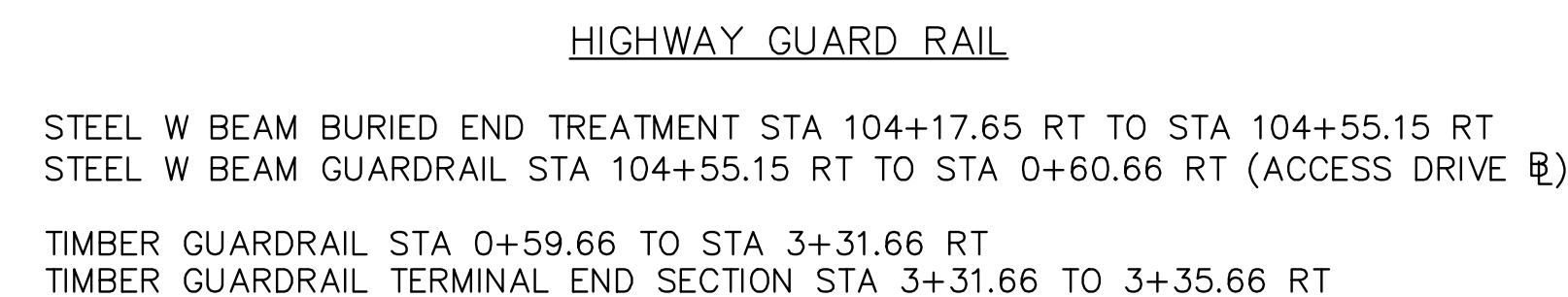


OAK BLUFFS – TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	9	254

PROJECT FILE NO.: 604029

DRIVEWAY & WHEELCHAIR RAMP
DETAILS

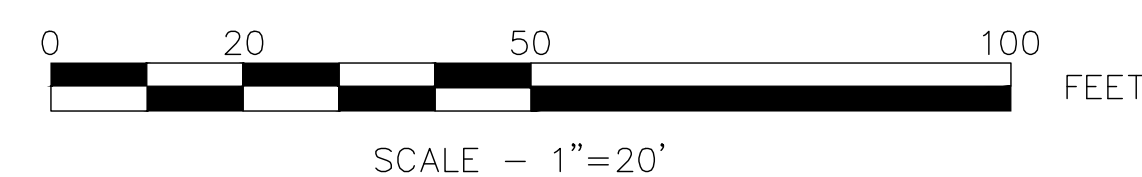


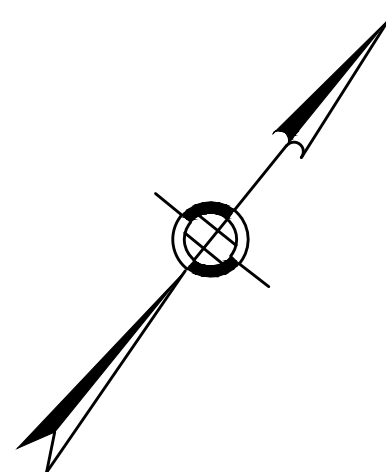
SEE DRAINAGE AND UTILITY PLAN SHEET 22

NONE

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEET
MA	BR-002S(462)	11	254
PROJECT FILE NO.: 604029			

CONSTRUCTION PLAN





HIGHWAY GUARD RAIL

TIMBER GUARDRAIL STA 0+59.66 TO STA 3+31.66 RT
TIMBER GUARDRAIL TERMINAL END SECTION STA 3+31.66 TO 3+35.66 RT

STEEL W BEAM TERMINAL SECTION STA 119+70.51 RT TO STA 119+72.06 RT
STEEL W BEAM GUARDRAIL STA 119+72.06 RT TO STA 120+70.31 RT
STEEL W BEAM BURIED END TREATMENT STA 120+70.31 RT TO STA 121+07.59 RT

BRIDGE RAIL TO HIGHWAY GUARDRAIL STA 117+34.17 LT TO STA 117+61.09 LT
STEEL W BEAM TO THRIE BEAM GUARDRAIL TRANSITION STA 117+61.09 LT TO STA 117+67.34 LT
STEEL W BEAM GUARDRAIL STA 117+67.34 LT TO STA 119+79.84 LT
STEEL W BEAM BEAM BURIED END TREATMENT STA 119+79.84 LT TO STA 120+17.34 LT

DRAINAGE DETAILS

SEE DRAINAGE AND UTILITY PLAN SHEET 23

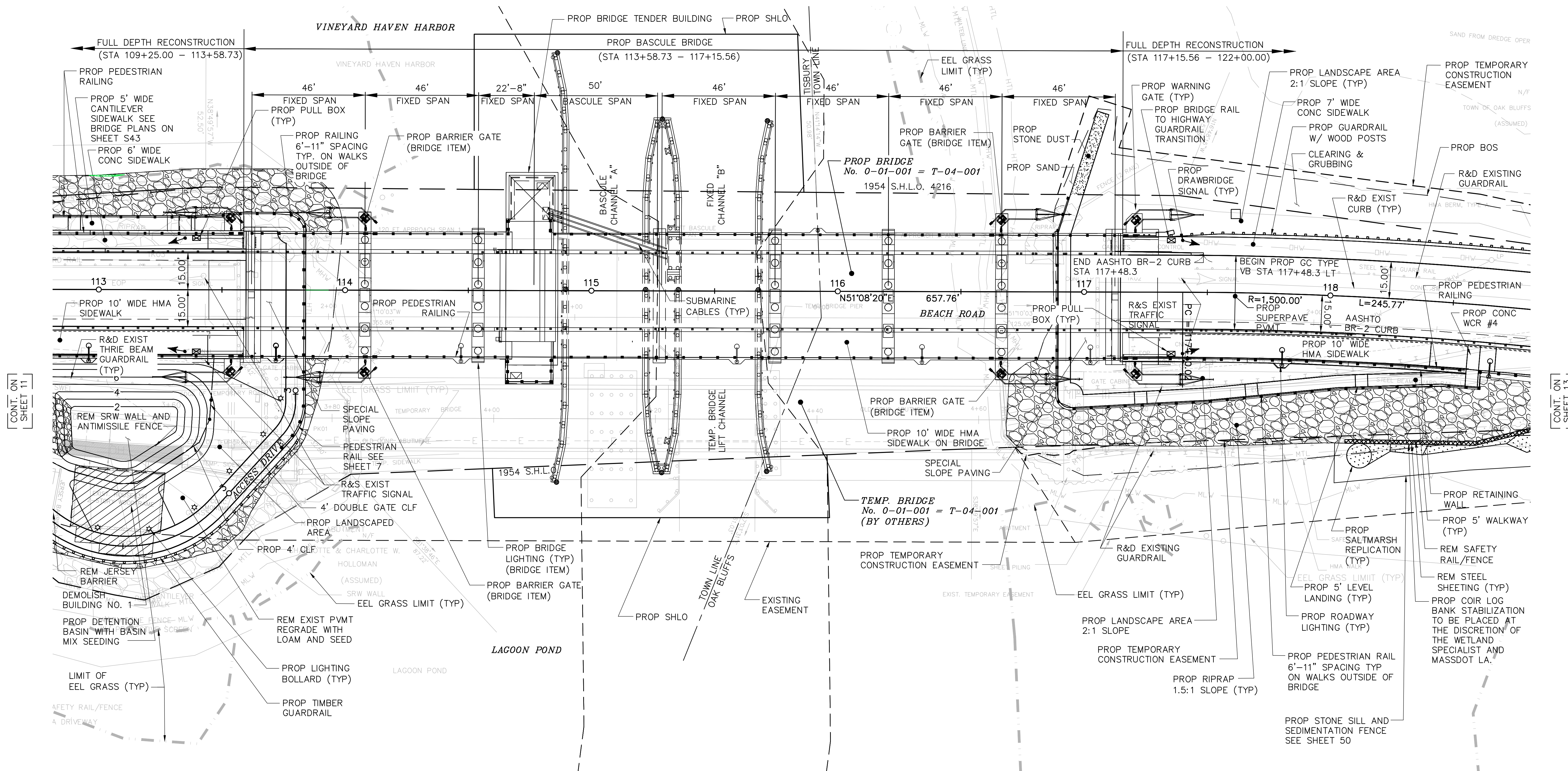
WATER SUPPLY ALTERATION

NONE

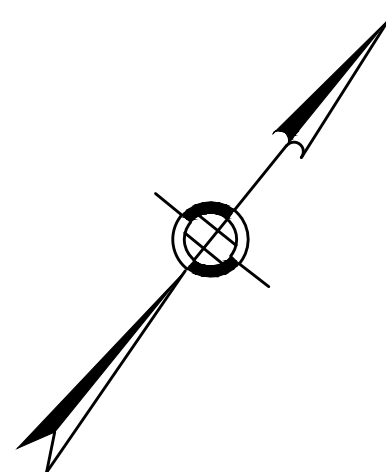
OAK BLUFFS - TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	12	254
PROJECT FILE NO.: 604029			

CONSTRUCTION PLAN



SEE SHEET 15 FOR PROFILE.
SEE SHEET 19 FOR CURB TIE PLAN.
SEE SHEET 23 FOR DRAINAGE, UTILITIES AND EROSION CONTROL.



HIGHWAY GUARD RAIL

STEEL W BEAM TERMINAL SECTION STA 119+70.51 RT TO STA 119+72.06 RT
STEEL W BEAM GUARDRAIL STA 119+72.06 RT TO STA 120+70.31 RT
STEEL W BEAM BURIED END TREATMENT STA 120+70.31 RT TO STA 121+07.59 RT

BRIDGE RAIL TO HIGHWAY GUARDRAIL STA 117+34.17 LT TO STA 117+61.09 LT
STEEL W BEAM TO THRIE BEAM GUARDRAIL TRANSITION STA 117+61.09 LT TO STA 117+67.34 LT
STEEL W BEAM GUARDRAIL STA 117+67.34 LT TO STA 119+79.84 LT
STEEL W BEAM BEAM BURIED END TREATMENT STA 119+79.84 LT TO STA 120+17.34 LT

DRAINAGE DETAILS

SEE DRAINAGE AND UTILITY PLAN SHEET 24

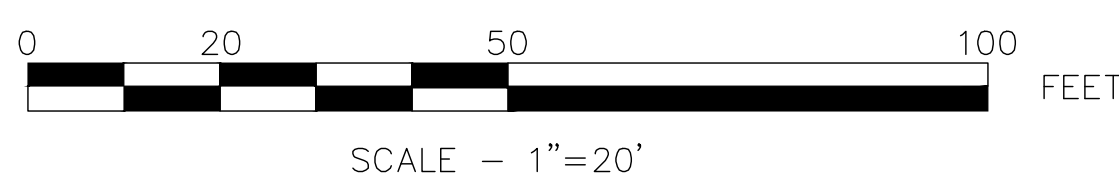
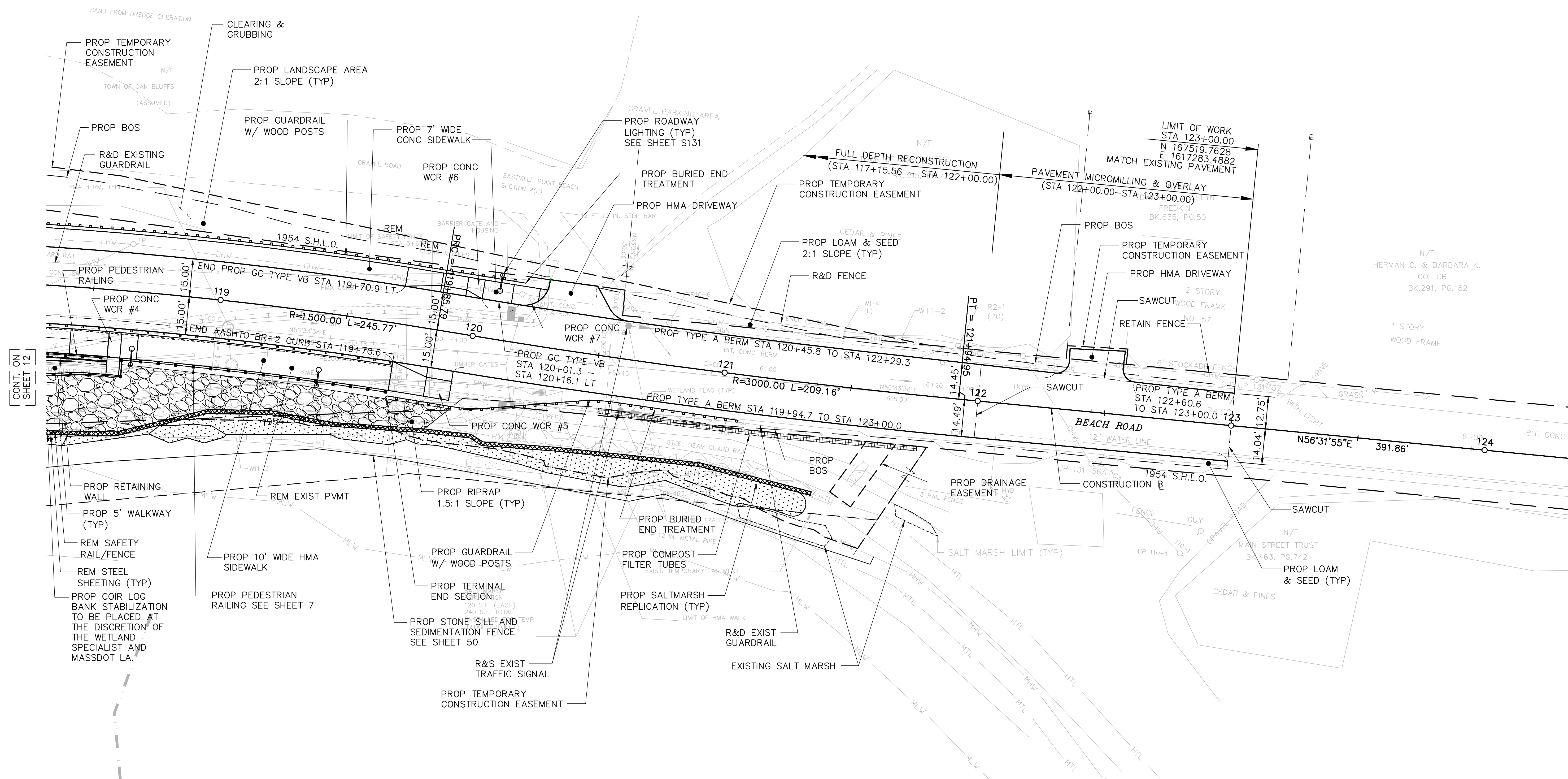
WATER SUPPLY ALTERATION

NONE

OAK BLUFFS - TISBURY BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	13	254
PROJECT FILE NO.: 604029			

CONSTRUCTION PLAN

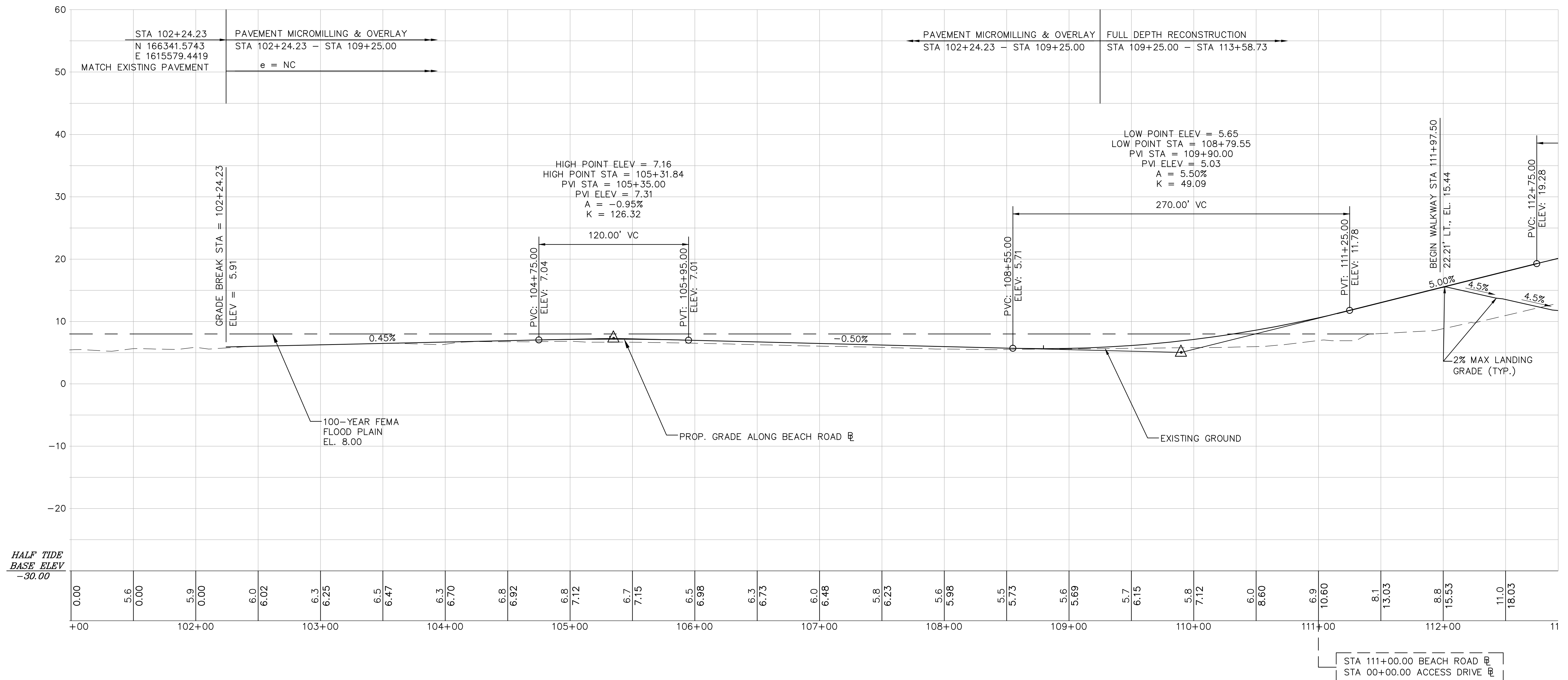


SEE SHEET 15 FOR PROFILE.
SEE SHEET 20 FOR CURB TIE PLAN.
SEE SHEET 24 FOR DRAINAGE, UTILITIES AND EROSION CONTROL.

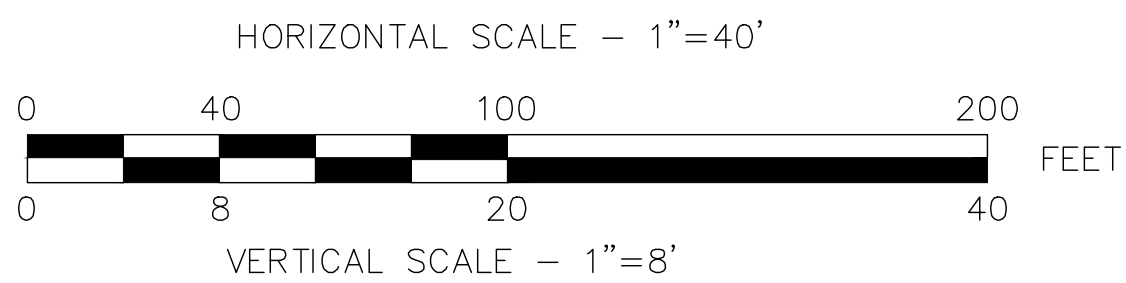
OAK BLUFFS – TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	14	254
PROJECT FILE NO.: 604029			

BEACH ROAD PROFILE



CONT. ON
SHEET 15

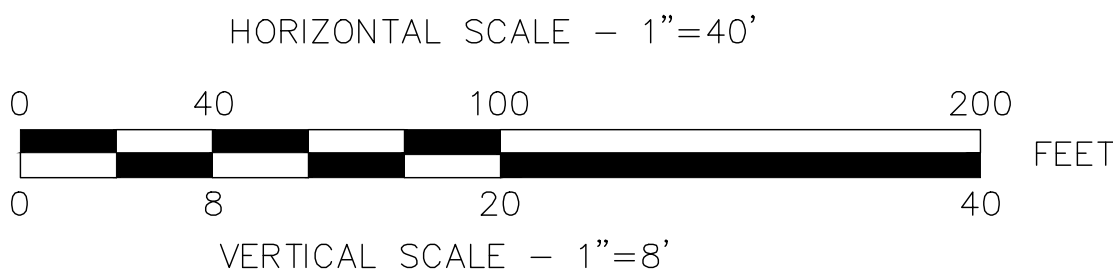
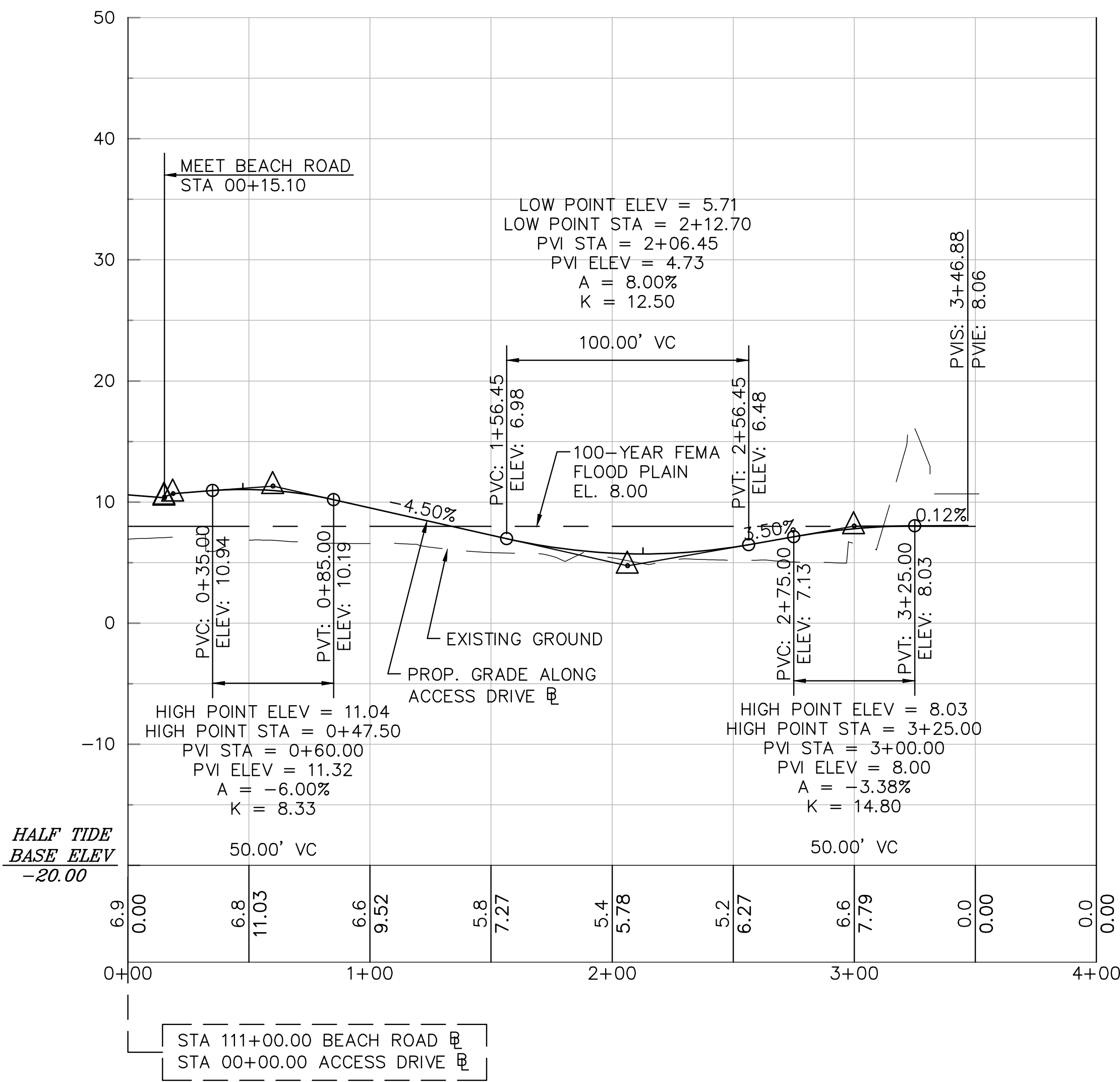


SEE SHEET 10 FOR PLAN.

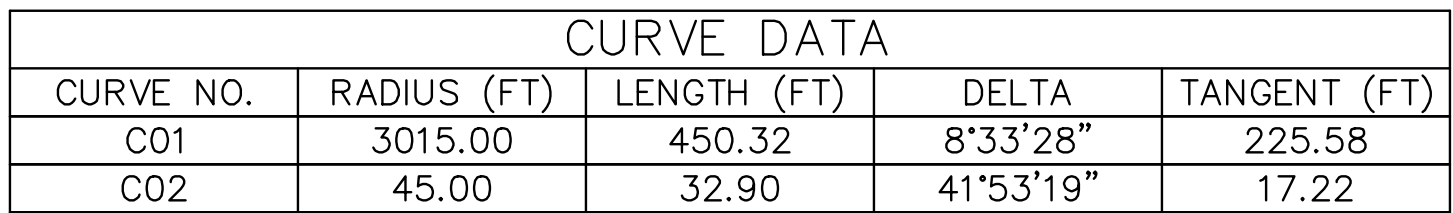
OAK BLUFFS – TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	16	254
PROJECT FILE NO.: 604029			

ACCESS DRIVE PROFILE

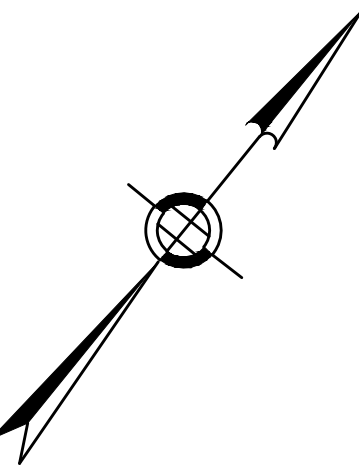


SEE SHEET 11 FOR PLAN.

CURB TIE AND GRADING PLAN

0 20 50 100 FEET

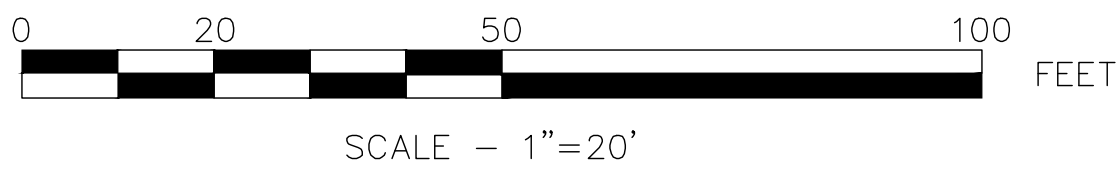
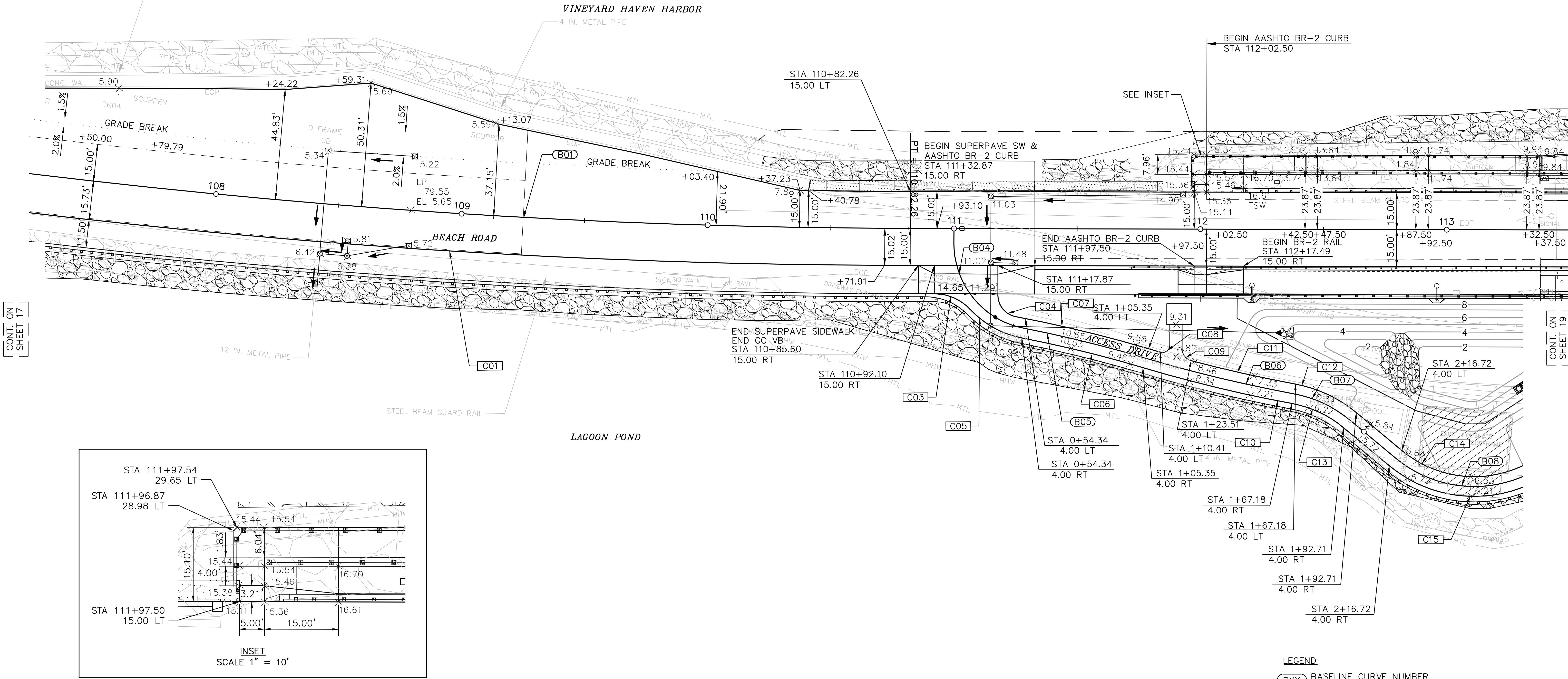
SCALE - 1"=20'



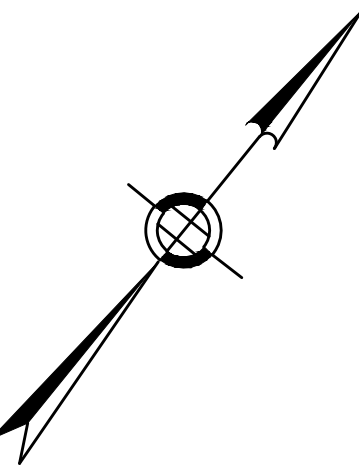
CURVE DATA				
CURVE NO.	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT (FT)
C01	3015.00	450.32	8°33'28"	225.58
C03	20.00	16.42	47°02'24"	8.70
C04	9.00	12.49	79°31'56"	7.49
C05	39.00	24.39	35°50'11"	12.61
C06	526.00	50.63	5°30'52"	25.33
C07	534.00	55.37	5°56'27"	27.71
C08	3.00	5.55	105°54'48"	3.97
C09	5.00	6.58	75°22'15"	3.86
C10	589.00	62.26	6°03'22"	31.16
C11	581.00	43.37	4°16'37"	21.70
C12	54.00	27.57	29°15'13"	14.09
C13	46.00	23.49	29°15'13"	12.01
C14	46.00	70.04	87°14'28"	43.84
C15	54.00	82.22	87°14'28"	51.46

OAK BLUFFS – TISBURY			
BEACH ROAD OVER LAGOON POND			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	18	254
PROJECT FILE NO.: 604029			

CURB TIE AND GRADING PLAN



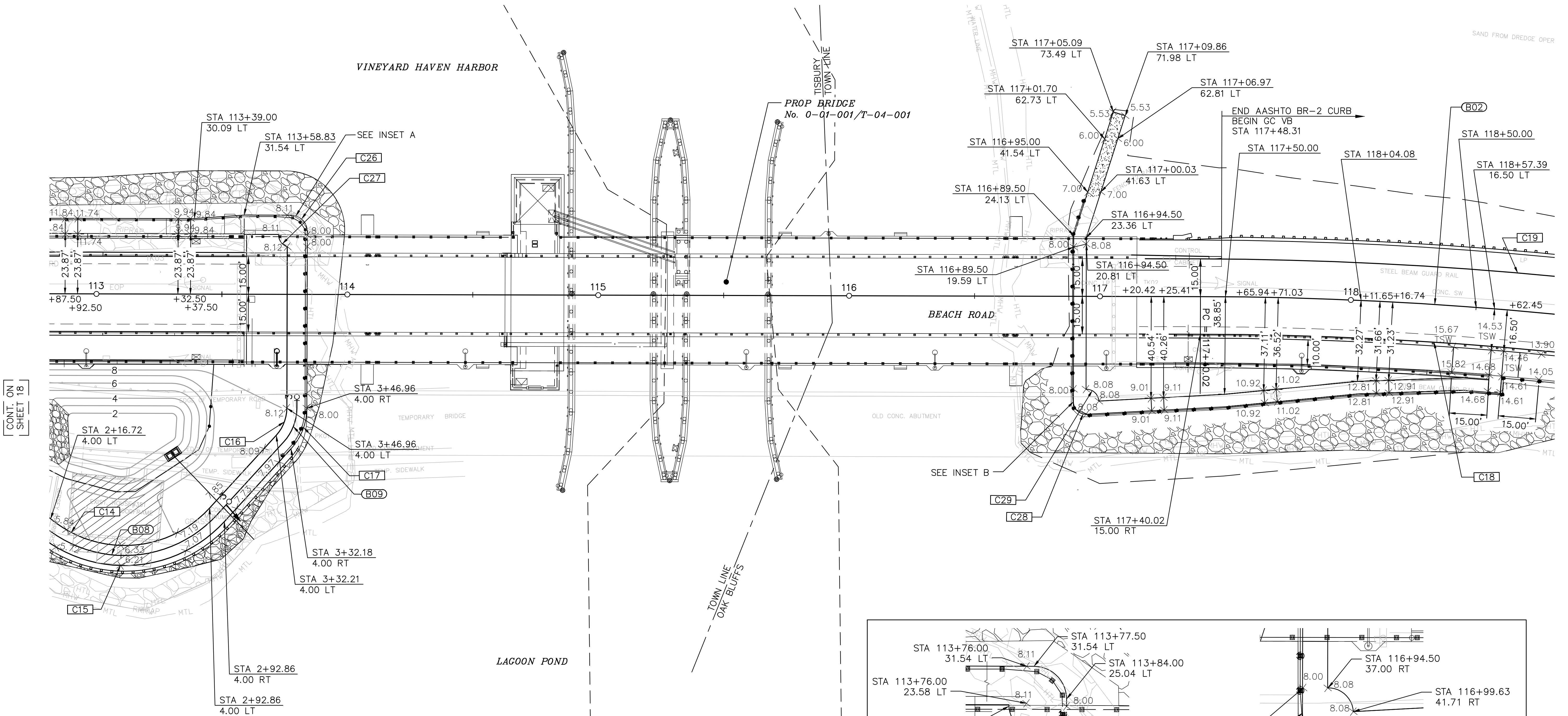
- LEGEND
- (BXX) BASELINE CURVE NUMBER
SEE SURVEY CONTROL PLAN ON SHEET 4
 - (CXX) CURVE NUMBER
 - ELEV SPOT SHOT
 - LP LOW POINT
 - TSW TOP OF SIDEWALK



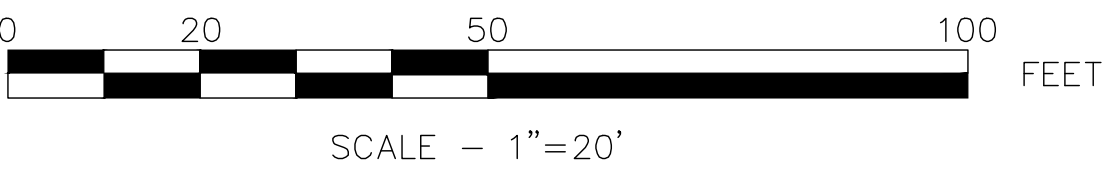
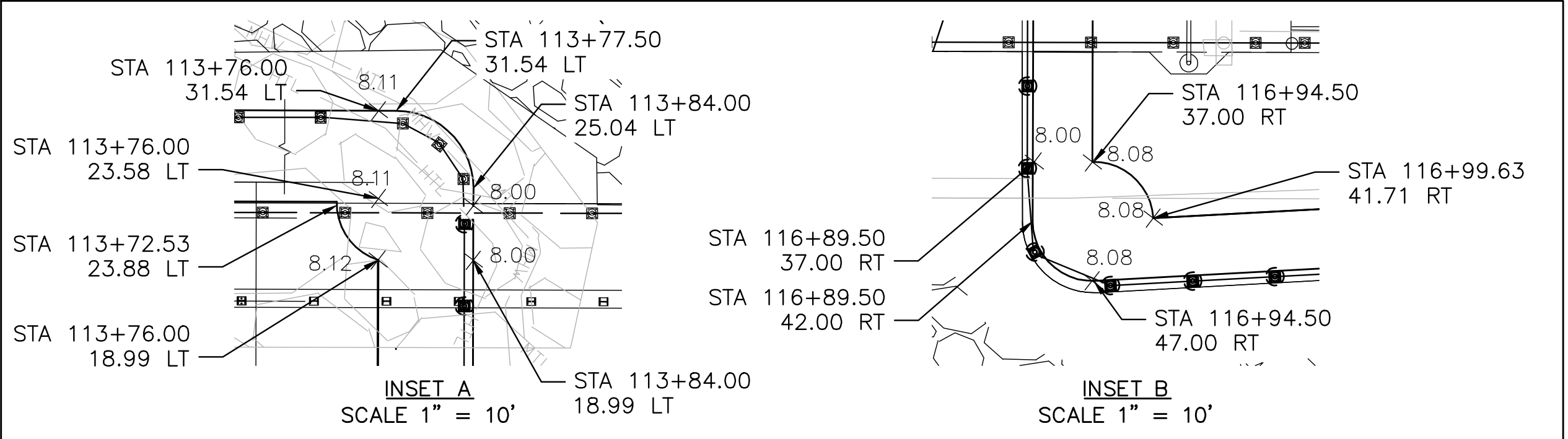
CURVE DATA				
CURVE NO.	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT (FT)
C14	46.00	70.04	87°14'28"	43.84
C15	54.00	82.22	87°14'28"	51.46
C16	16.00	11.81	42°18'23"	6.19
C17	24.00	17.72	42°18'23"	9.29
C18	1485.00	240.91	9°17'42"	120.72
C19	1515.00	249.57	9°26'19"	125.07
C26	6.50	10.21	90°00'00"	6.50
C27	5.00	6.43	73°41'01"	3.75
C28	5.00	8.14	93°15'00"	5.29
C29	5.00	7.71	88°18'43"	4.85

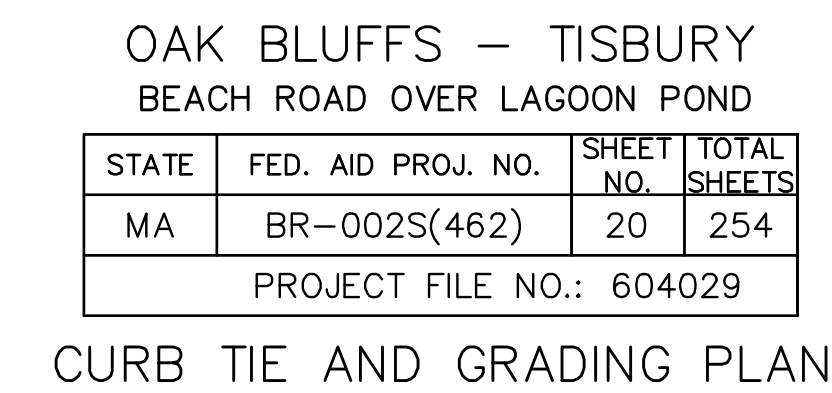
OAK BLUFFS — TISBURY BEACH ROAD OVER LAGOON POND			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	19	254
PROJECT FILE NO.: 604029			

CURB TIE AND GRADING PLAN

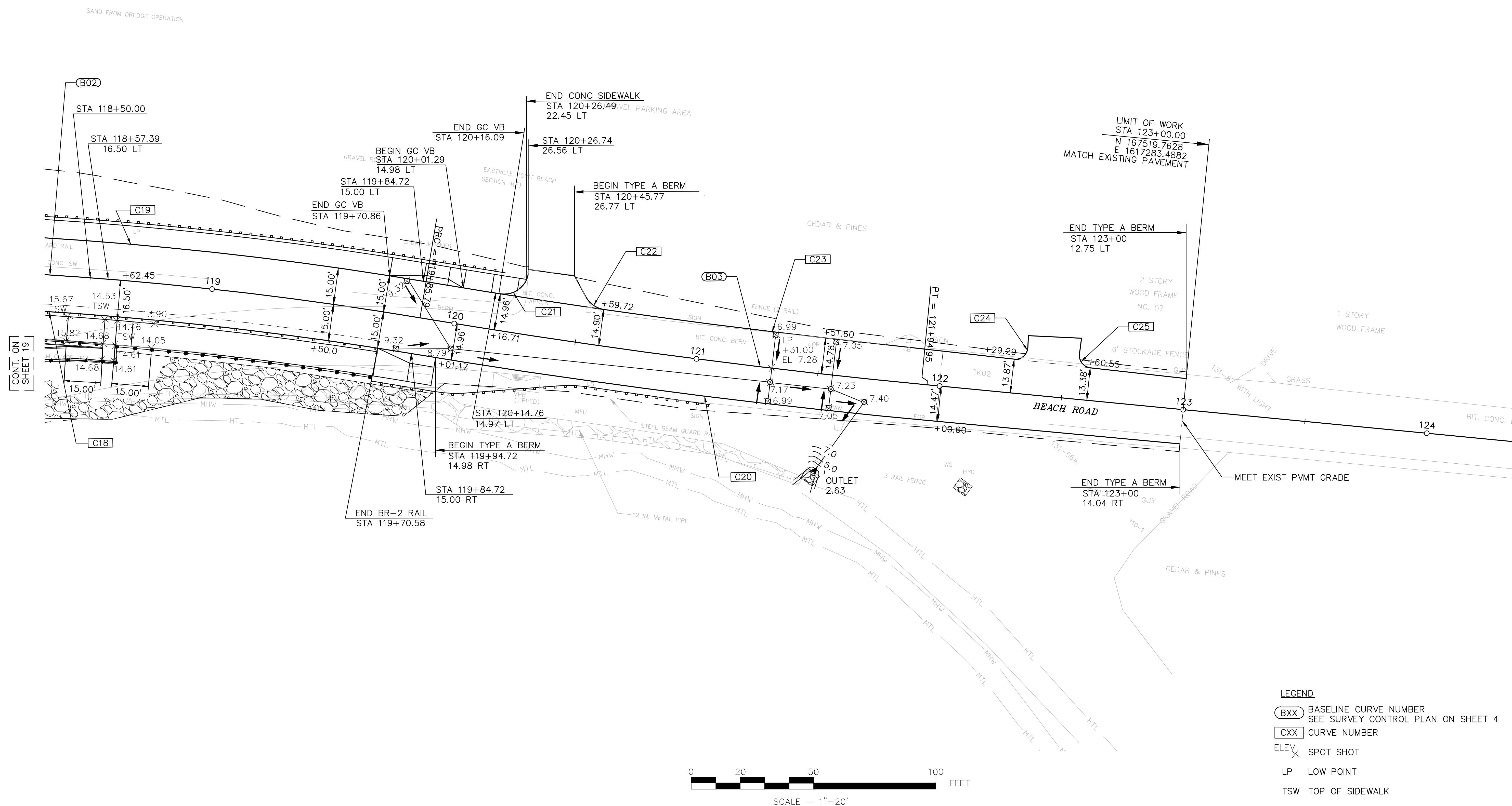


- LEGEND**
- BXX** BASELINE CURVE NUMBER
SEE SURVEY CONTROL PLAN ON SHEET 4
 - CXX** CURVE NUMBER
 - ELEV** SPOT SHOT
 - LP** LOW POINT
 - TSW** TOP OF SIDEWALK





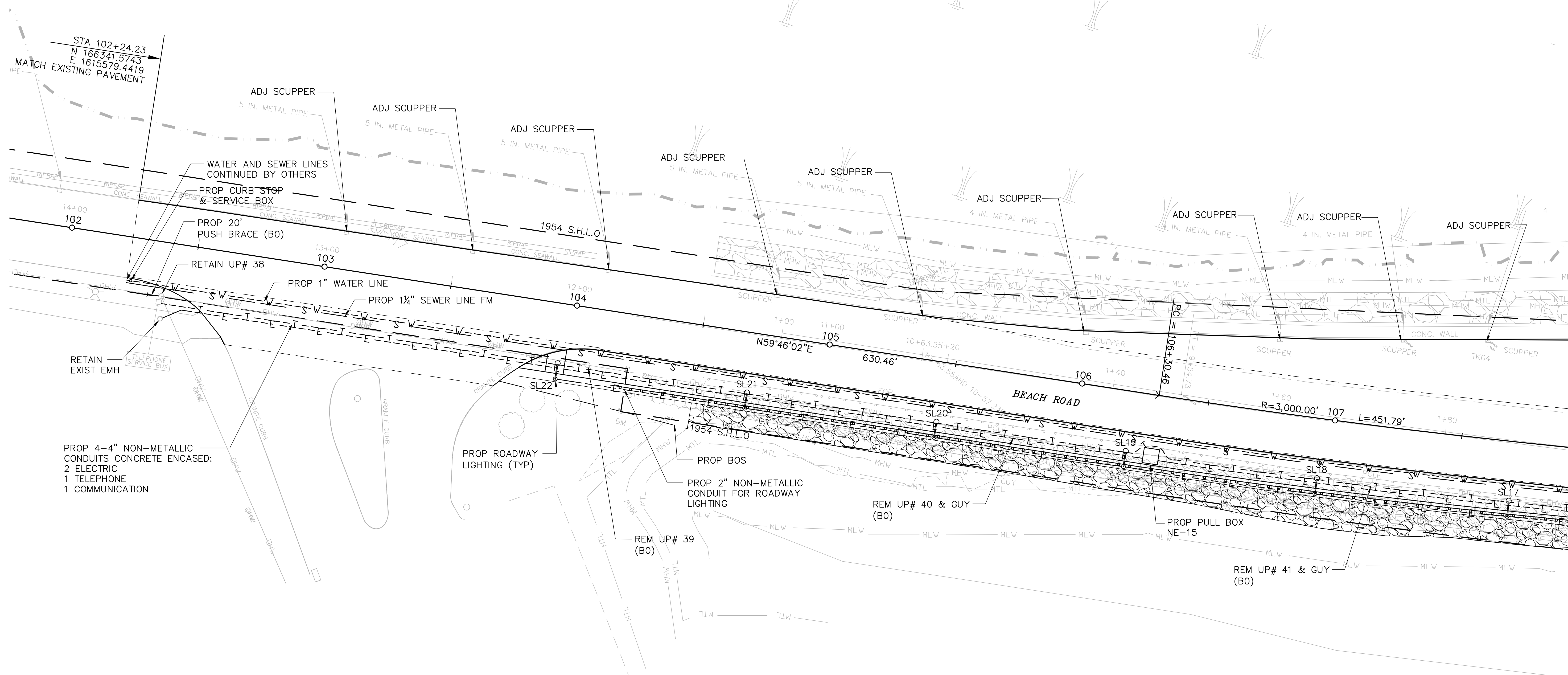
CURVE DATA				
CURVE NO.	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT (FT)
C18	1485.00	240.91	9°17'42"	120.72
C19	1515.00	249.57	9°26'19"	125.07
C20	3015.00	218.25	4°08'51"	109.17
C21	10.00	16.30	93°24'13"	10.61
C22	10.00	9.33	53°27'01"	5.04
C23	2985.00	163.65	3°08'28"	81.84
C24	5.00	8.18	93°47'17"	5.34
C25	5.00	7.92	90°44'10"	5.06



OAK BLUFFS — TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	21	254
PROJECT FILE NO.: 604029			

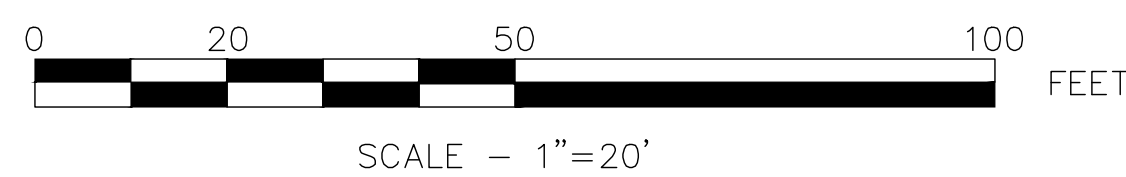
DRAINAGE AND UTILITY PLAN



PROP 4-4" NON-METALLIC
CONDUITS CONCRETE ENCASED:
2 ELECTRIC
1 TELEPHONE
1 COMMUNICATION

STREET LIGHTING	
SL#	STATION
SL22	103+95.9
SL21	104+70.9
SL20	105+45.9
SL19	106+20.9
SL18	106+95.9
SL17	107+70.9

OFFSET 2'-3' FROM BACK OF SIDEWALK



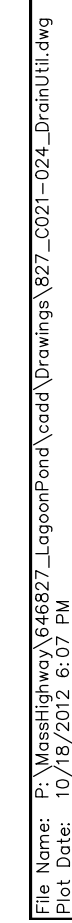
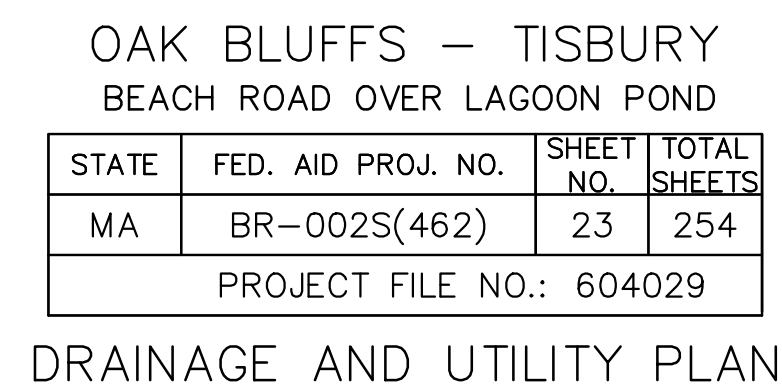
NOTE:

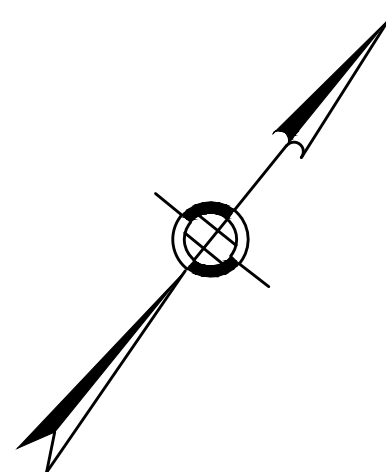
THE ONLY EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS ARE DRAINAGE. CONTRACTOR SHALL VERIFY IN FIELD PRIOR TO CONSTRUCTION.

SL# = STREET LIGHT NUMBER
(MAX. SPACING FOR STREET LIGHTING SHALL BE 75 FT.)

SEE SHEET 10 FOR CONSTRUCTION PLAN.

CONT. ON
SHEET 22



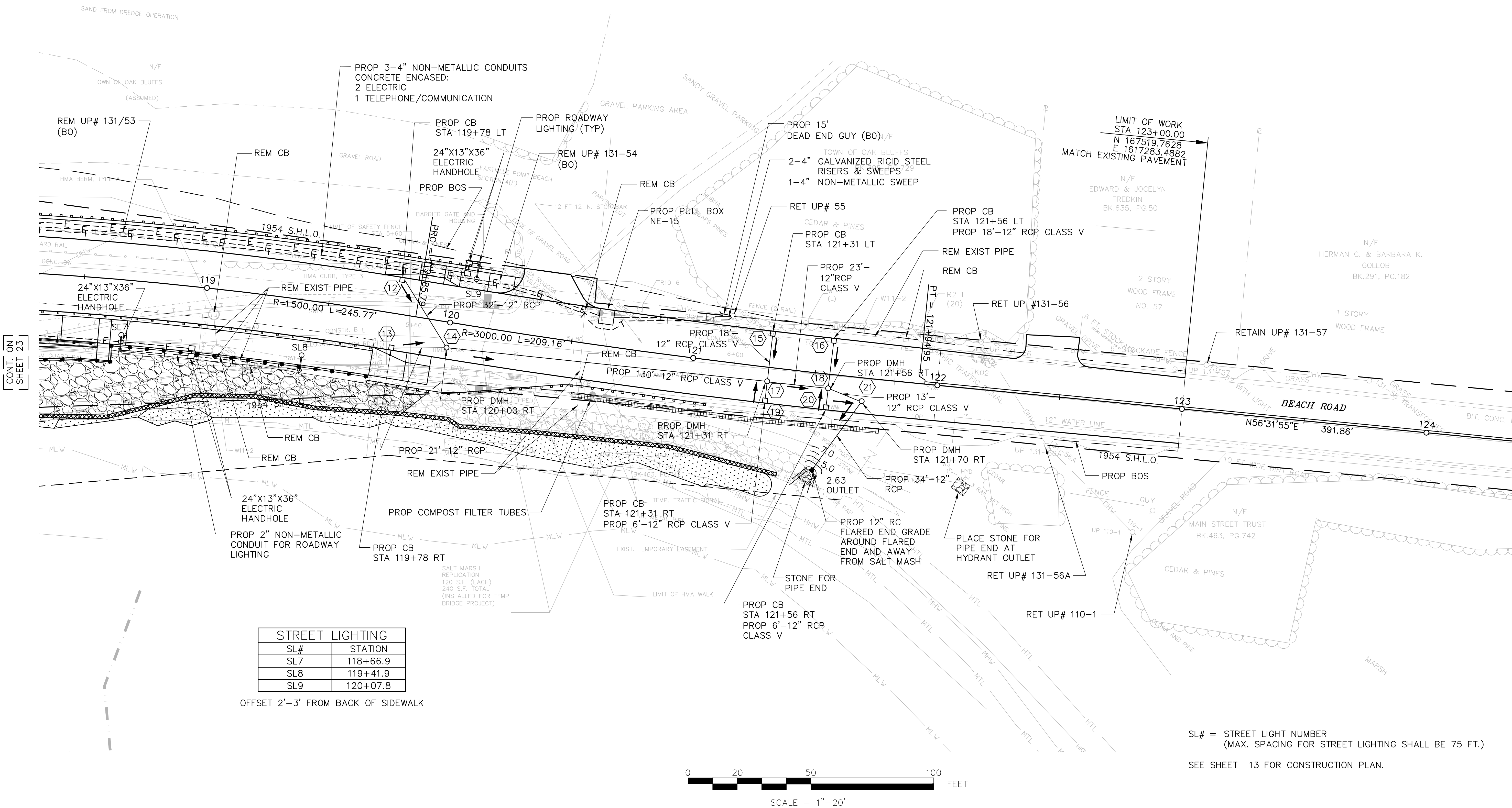


DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
12	CB	119+78.0 LT	9.32	--	4.95	--
13	CB	119+78.0 RT	9.32	--	4.95	--
14	DMH	120+00.0 RT	8.79	12 4.42 13 4.42	4.30	--
15	CB	121+31.0 LT	6.99	--	3.61	--
16	CB	121+56.0 LT	7.05	--	3.67	--
17	DMH	121+31.0 RT	7.17	14 3.72 15 3.53 16 3.03	3.00	--

DRAINAGE STRUCTURE DATA CONTINUED						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
18	DMH	121+56.0 RT	7.23	18 3.06 19 2.90 20 2.85	2.84	--
19	CB	121+31.0 RT	6.99	--	3.06	--
20	CB	121+56.0 RT	7.05	--	2.88	--
21	DMH	121+70.0 RT	7.40	--	2.77	--

OAK BLUFFS - TISBURY BEACH ROAD OVER LAGOON POND			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	24	254
PROJECT FILE NO.: 604029			

DRAINAGE AND UTILITY PLAN

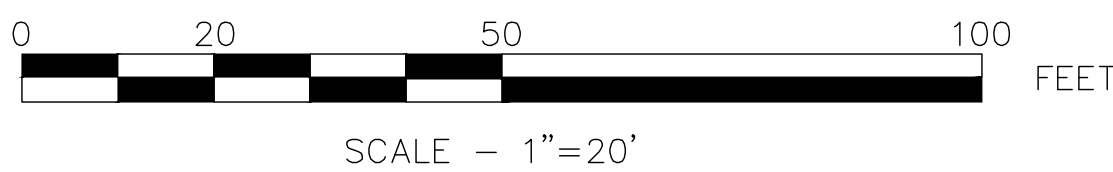


STREET LIGHTING	
SL#	STATION
SL7	118+66.9
SL8	119+41.9
SL9	120+07.8

OFFSET 2'-3' FROM BACK OF SIDEWALK

SL# = STREET LIGHT NUMBER
(MAX. SPACING FOR STREET LIGHTING SHALL BE 75 FT.)

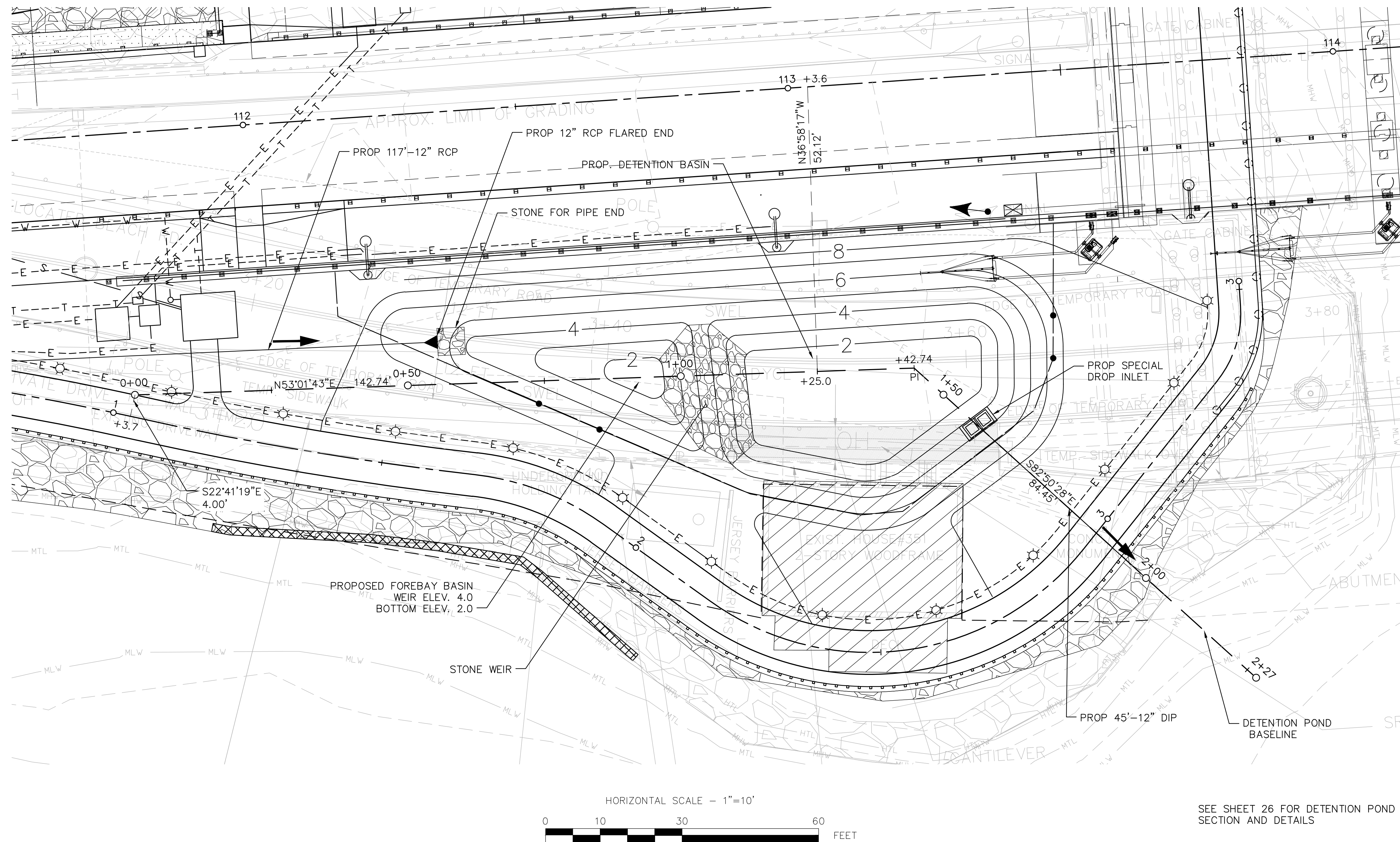
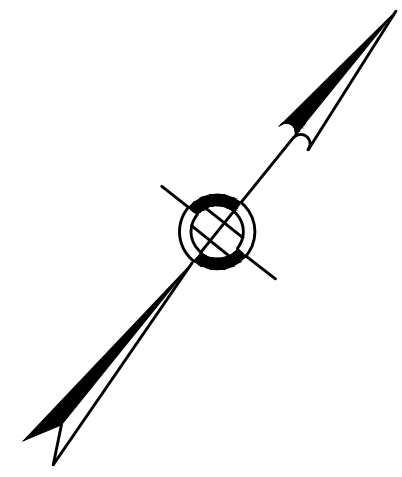
SEE SHEET 13 FOR CONSTRUCTION PLAN.



OAK BLUFFS — TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	25	254
PROJECT FILE NO.: 604029			

DETENTION BASIN PLAN



SEE SHEET 26 FOR DETENTION POND
SECTION AND DETAILS

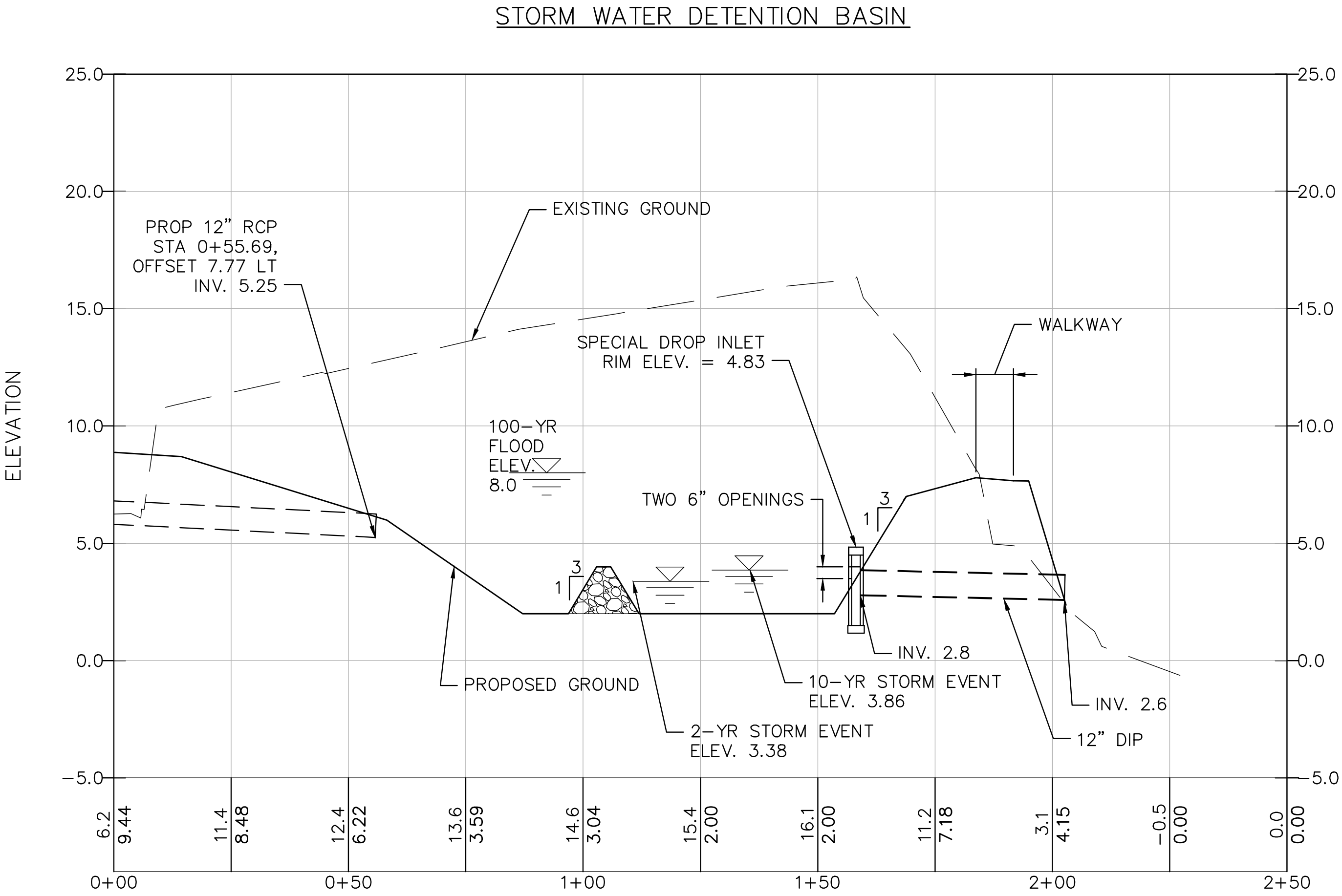
OAK BLUFFS – TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	26	254
PROJECT FILE NO.: 604029			

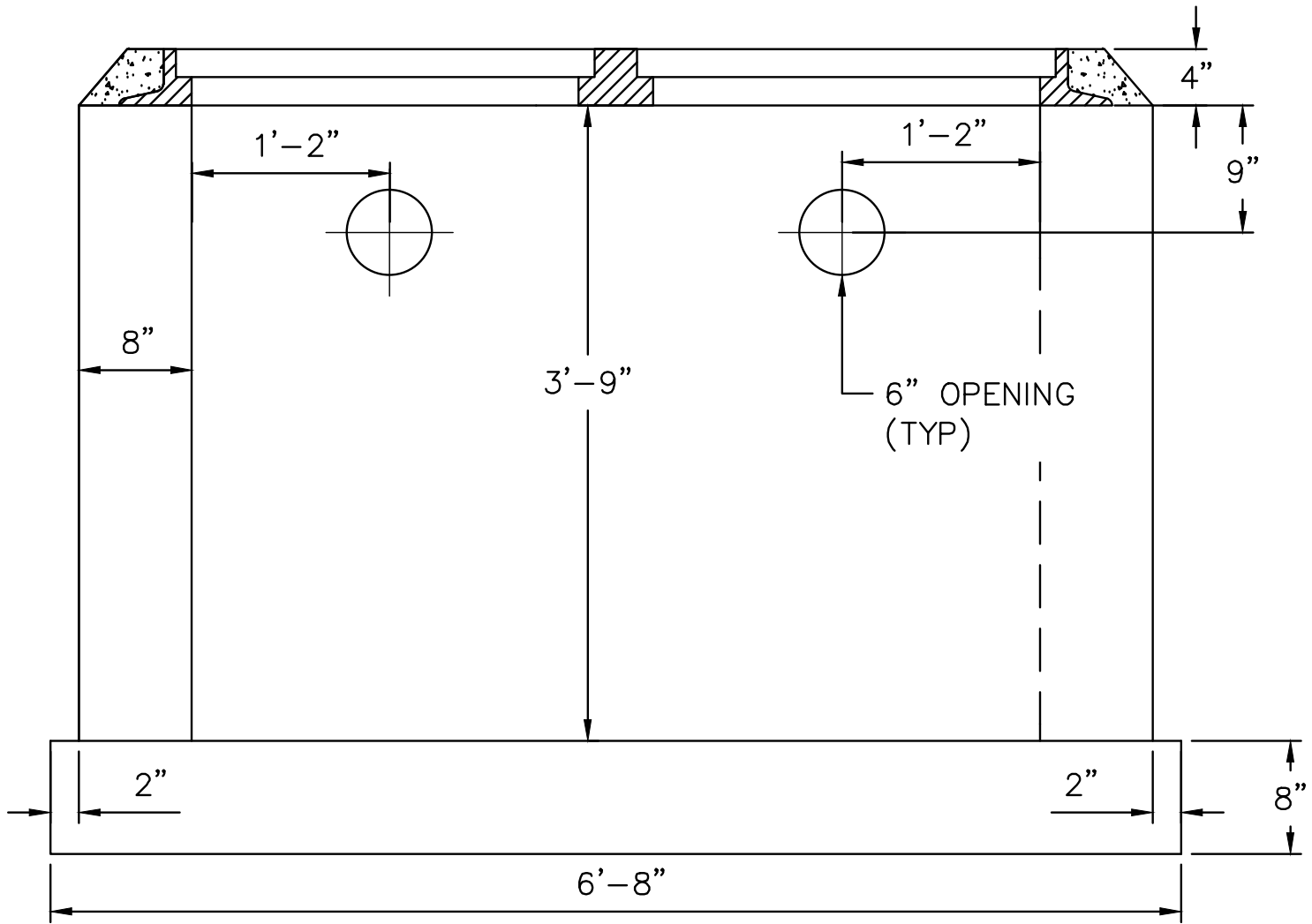
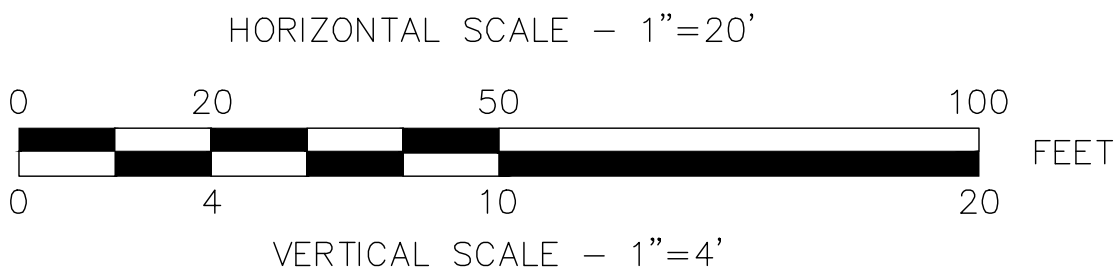
DETENTION BASIN DETAILS

NOTES:

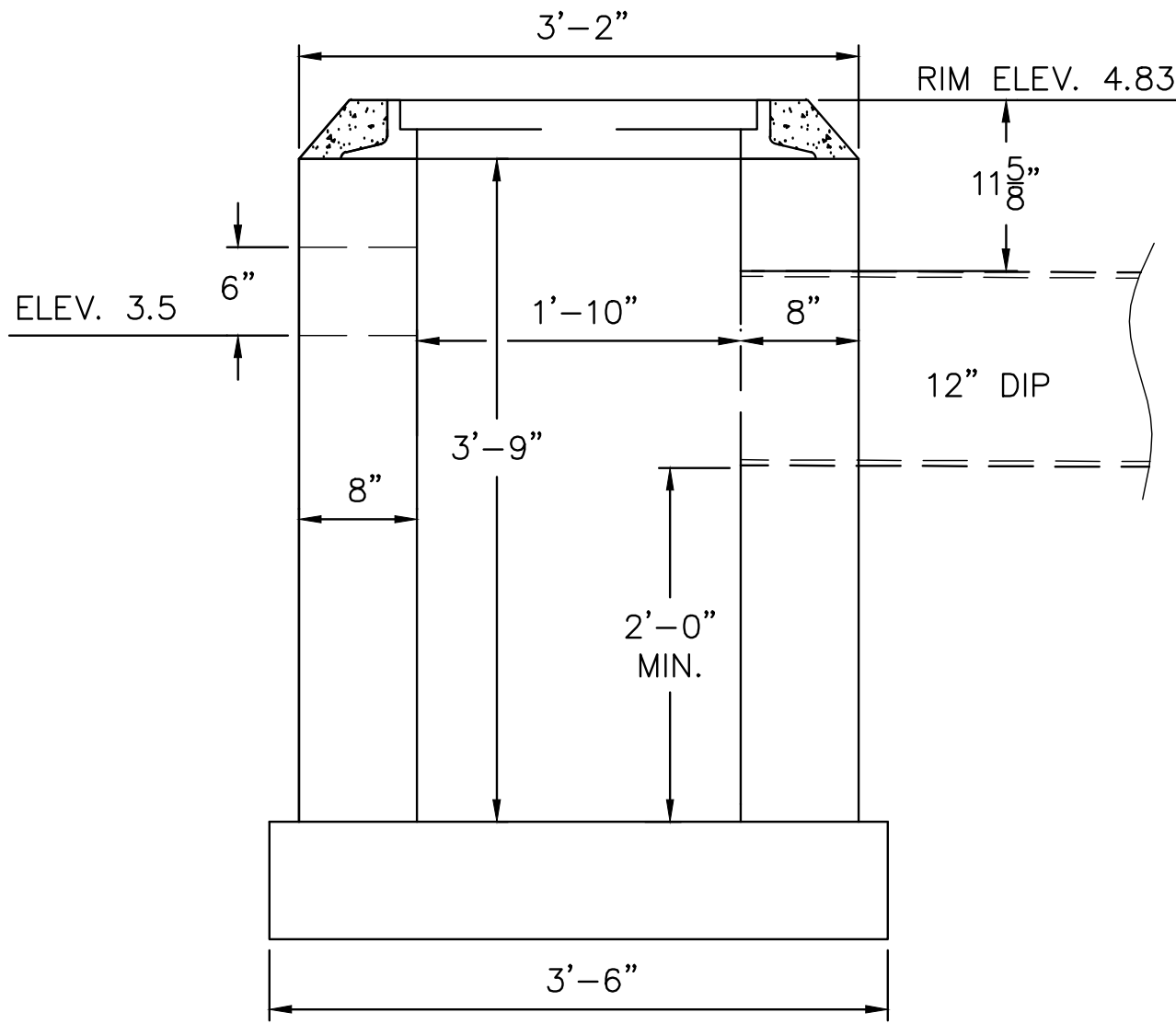
1. SEE STD. DWG E 203.1.0 FOR DETAILS NOT SHOWN.
2. STANDARD PARALLEL BAR GRATES TO BE USED SEE DETAILS ON STD. DWG E 201.10.0.
3. FOR DESCRIPTION OF MATERIALS AND CONSTRUCTION METHODS SEE LATEST SPECIFICATIONS.
4. 4000 PSI – 1 ½" – 565 LB
5. FOOTING – 4000 PSI – ¾" 610 LB CEMENT CONCRETE OR PRECAST CONCRETE SECTIONAL PLATES.



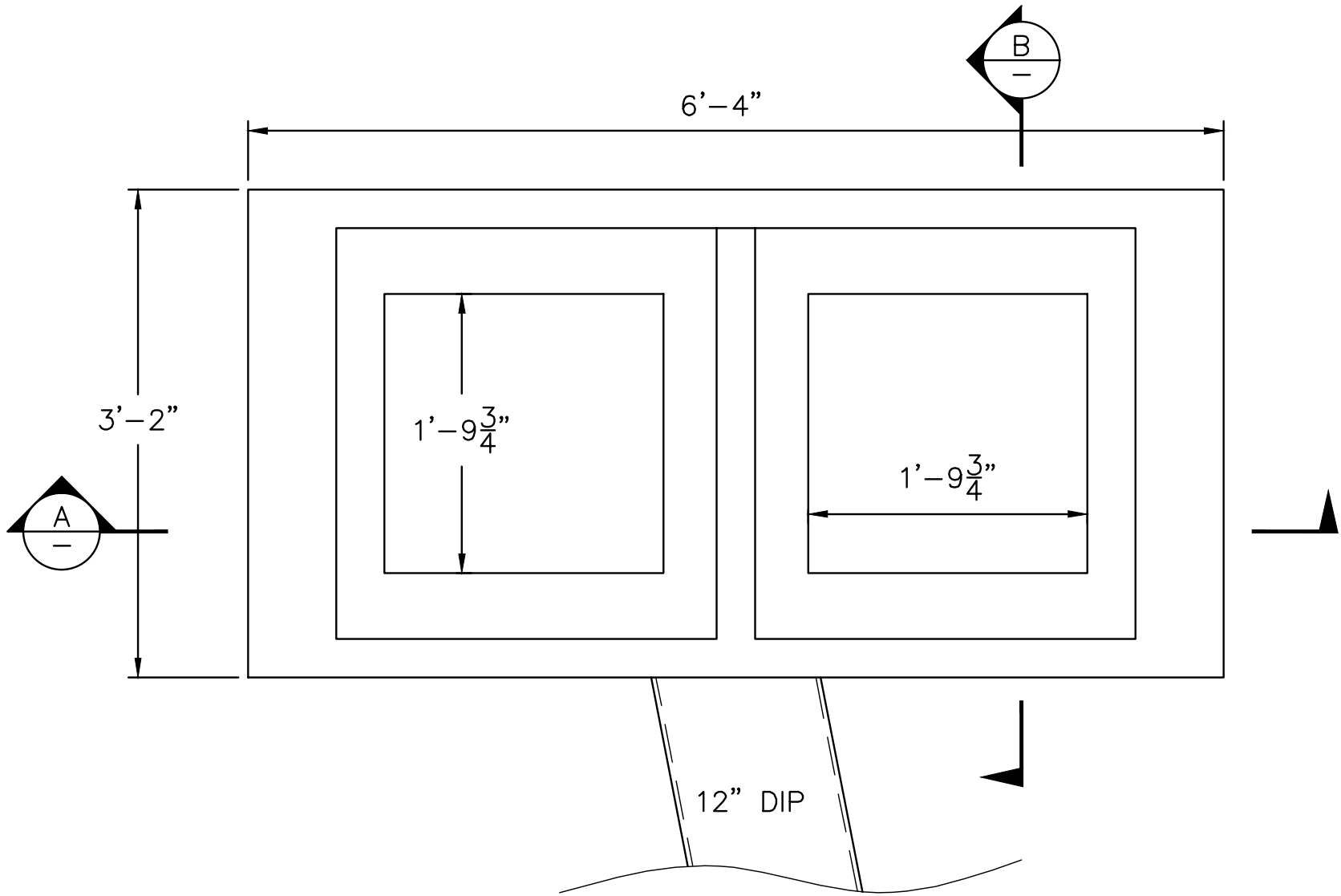
CONSTRUCTED STORM WATER DETENTION BASIN
BASELINE SECTION



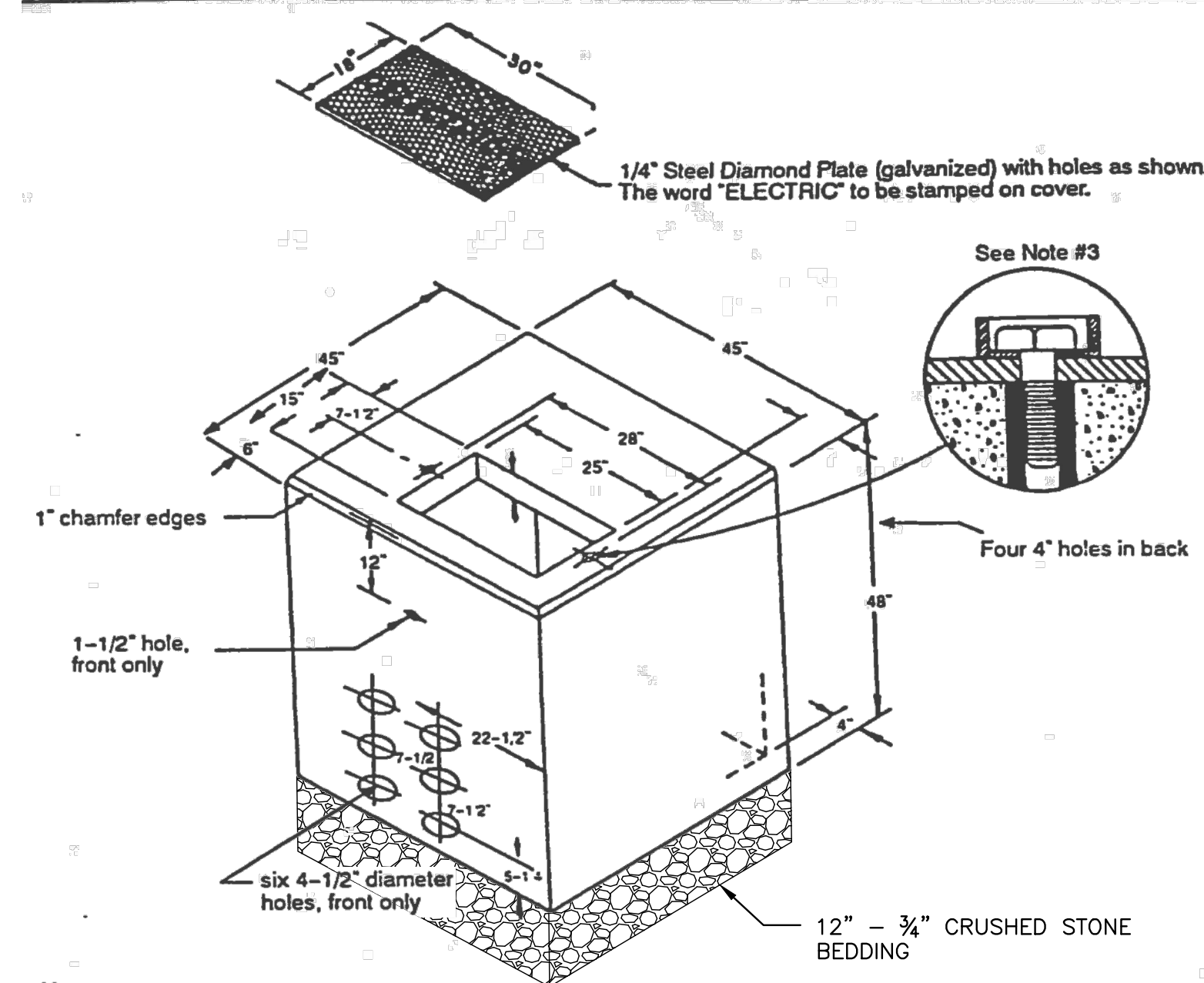
SECTION A
1" = 1'-0"



SECTION B
1" = 1'-0"



SPECIAL DROP INLET PLAN
1"=1'-0"

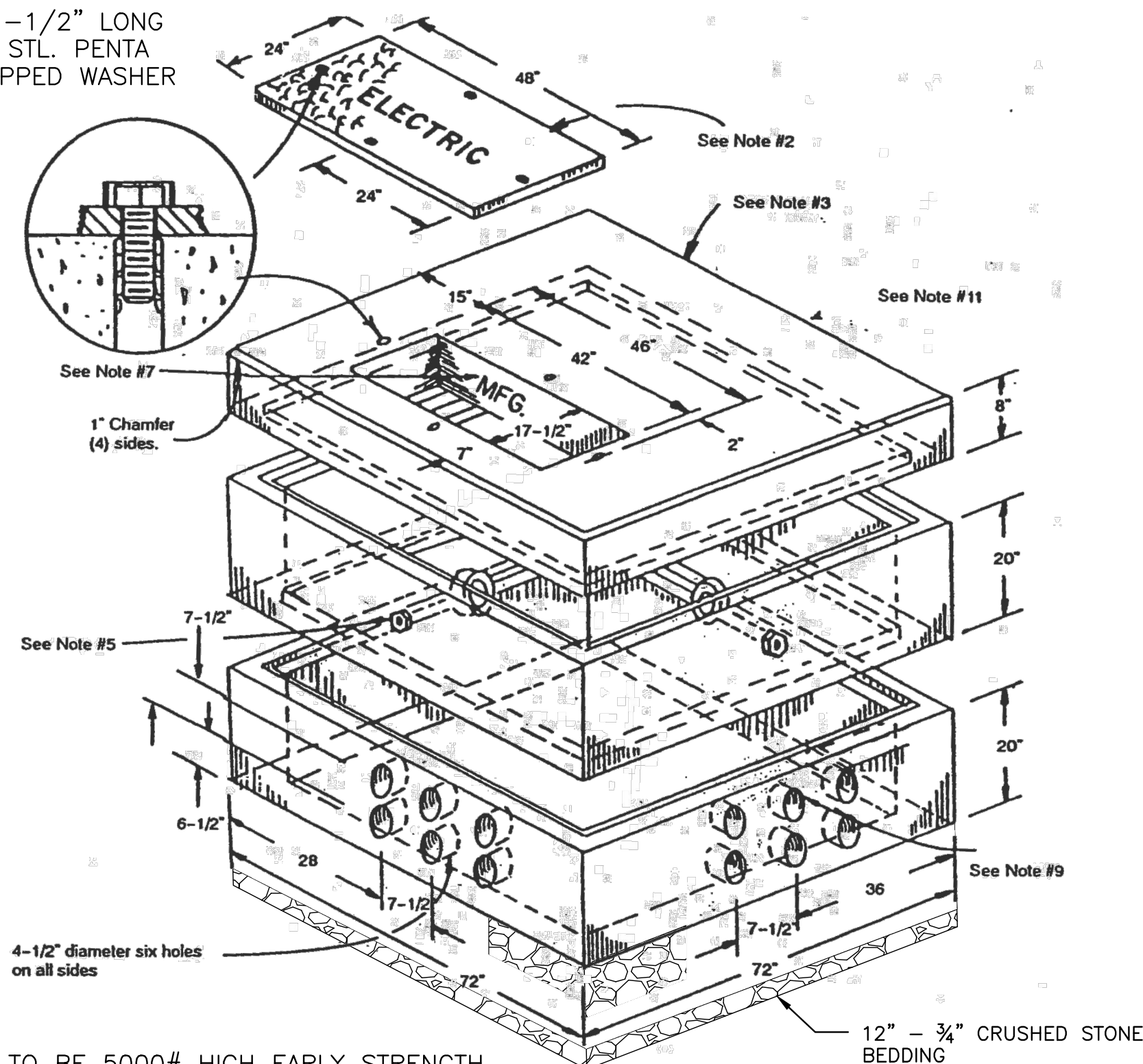


NOTES:

1. CONCRETE TO BE 4000# HIGH EARLY STRENGTH AND VIBRATOR COMPACTED.
2. TOP TO BE REINFORCED WITH #5 ROD TO SUPPORT H-10 WHEEL LOAD AND TO HAVE A TROWELLED FINISH.
3. 3/8" X 1 1/2" LONG FULL THREAD STAINLESS STEEL PENTA HEAD BOLT WITH CUP WASHER AND 2" LONG CINCH ANCHOR (2 PLACES).
4. COVER TO BE HOT DIPPED GALVANIZED AND PERMANENTLY MARKED WITH MINIMUM 2" BLOCK LETTERS WITH THE WORD "ELECTRIC" AS SHOWN.
5. CONDUIT OPENINGS TO HAVE 4" BELL ENDS FLUSH WITH INSIDE WALL.

SINGLE PHASE TRANSFORMER (PAD) FOUNDATION
25 KVA-167 KVA
SCALE: NTS

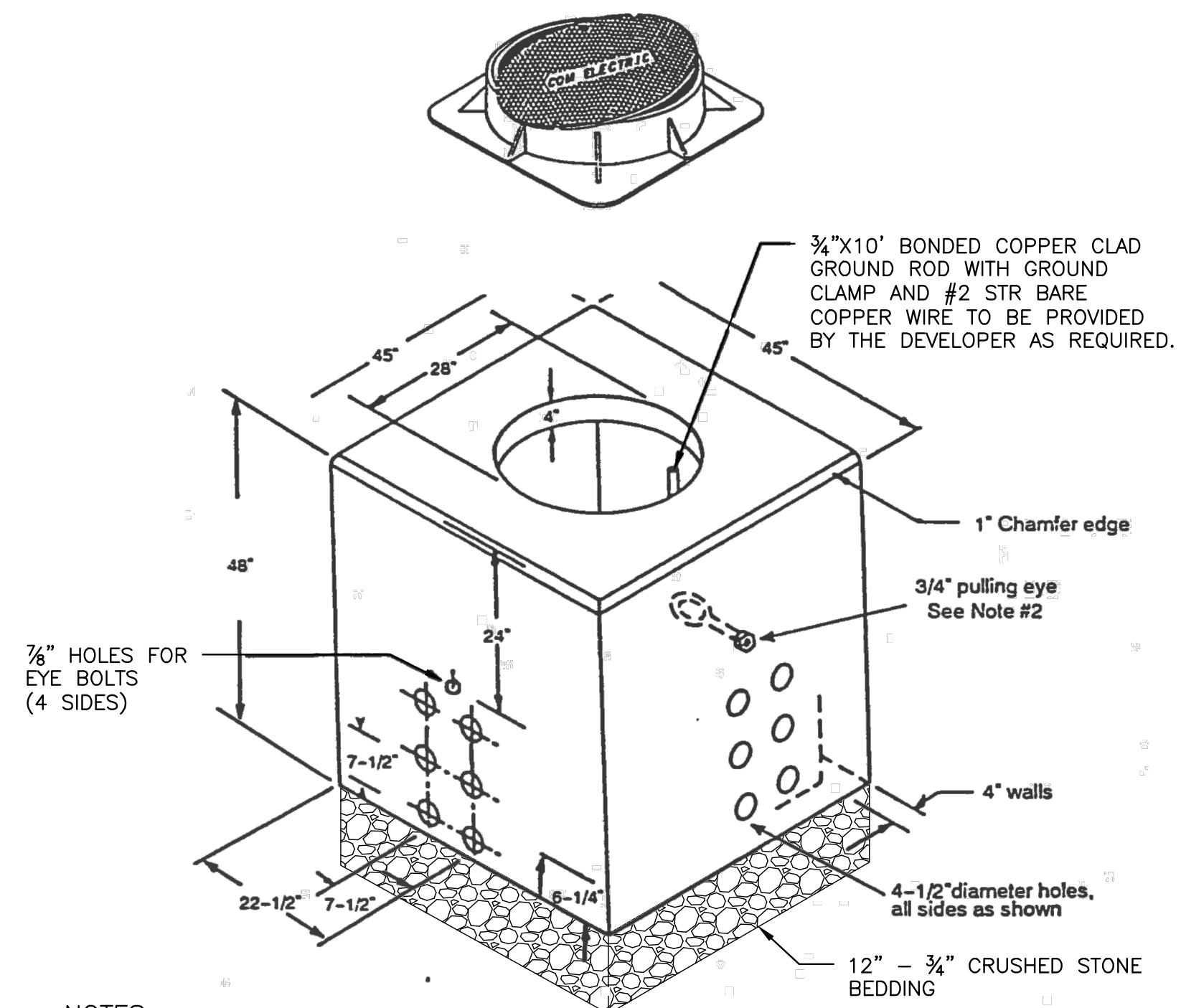
3/8" DIAMETER X 1-1/2" LONG
FULL THREAD ST. STL. PENTA
HEAD BOLT & CUPPED WASHER
(4) PLACES



NOTES:

1. CONCRETE TO BE 5000# HIGH EARLY STRENGTH.
2. COVER TO BE 3/8" ALUMINUM DIAMOND PLATE.
3. TOP TO BE REINFORCED WITH #5 ROD TO SUPPORT H-20 WHEEL LOAD.
4. CONCRETE TO BE COMPACTED WITH VIBRATOR.
5. GALVANIZED PULLING EYEBOLTS ALL FOUR SIDES.
6. ADDITIONAL DUCT OPENINGS ON SPECIAL ORDER.
7. MANUFACTURER'S NAME TO BE STENCILED ON VERTICAL CHIMNEY WALL.
8. CONDUIT OPENINGS TO HAVE 4" BELL ENDS FLUSH WITH INSIDE WALL.
9. PAD TO BE INSTALLED ON 12" BED OF CRUSHED STONE.
10. TOP OF PAD TO BE 4" ABOVE FINISHED GRADE.

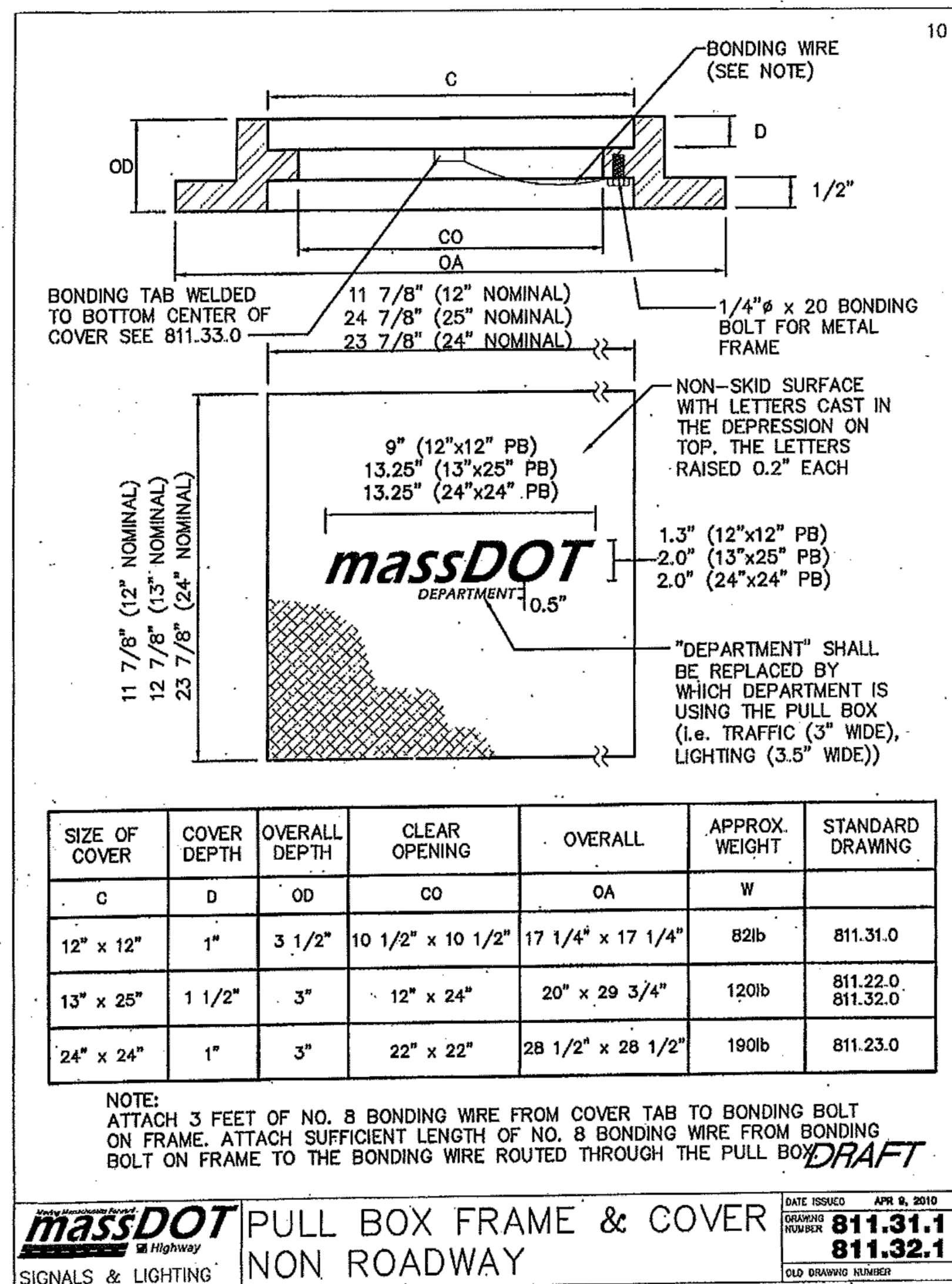
THREE PHASE TRANSFORMER (PAD) FOUNDATION
UP TO 150 KVA
SCALE: NTS



NOTES:

1. CONCRETE TO BE 5000 PSI HIGH EARLY STRENGTH VIBRATOR COMPACTED.
2. INSTALL GALVANIZED PULLING EYES, ONE ON EACH WALL (4) 3/4" EYES.
3. CONDUIT OPENING TO HAVE 4" BELL ENDS FLUSH WITH INSIDE WALL.
4. NO MANHOLE SHALL BE BURIED DEEPER THAN 18" BELOW FINISHED GRADE.

PRIMARY AND/OR SECONDARY PULL-BOX
SCALE: NTS



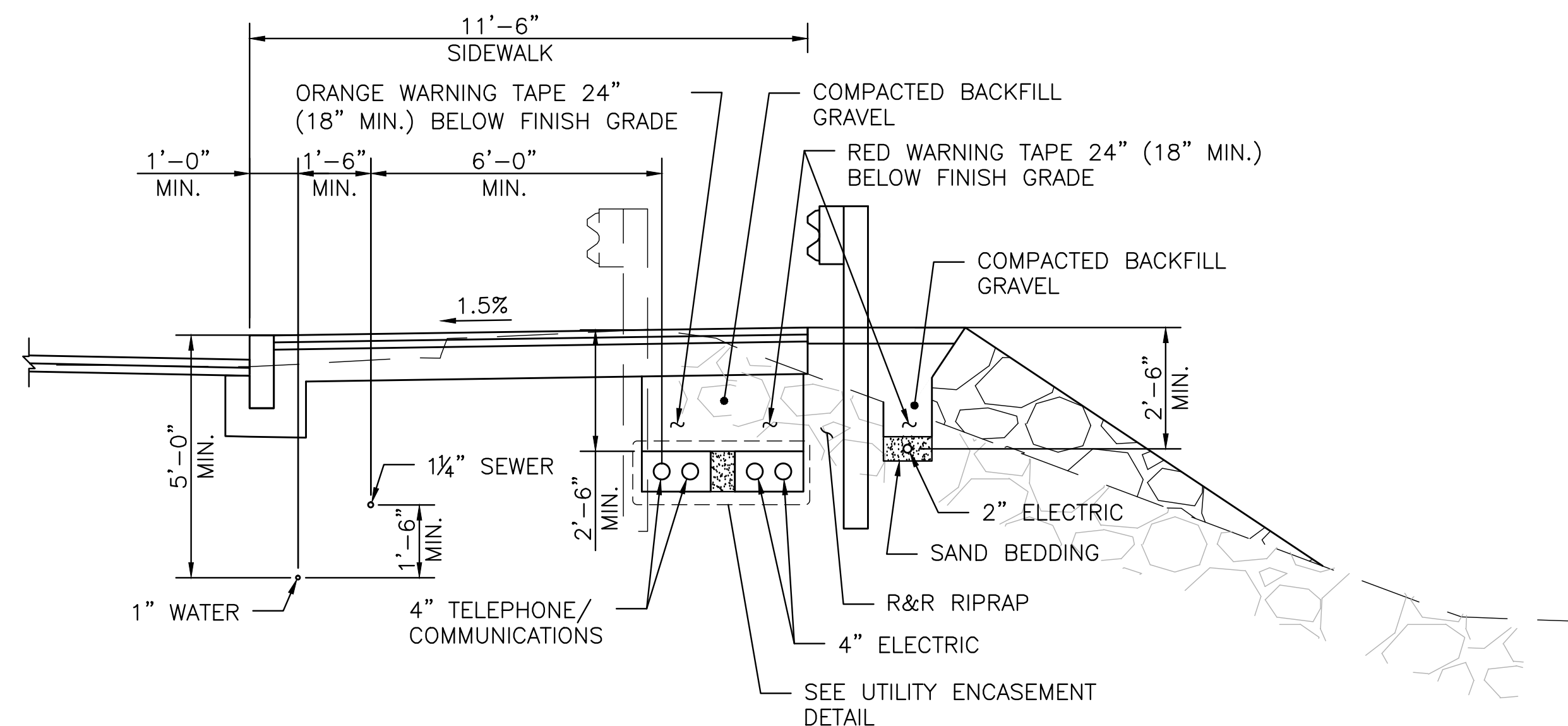
GENERAL NOTE:

CONTRACTOR SHALL INSTALL CONCRETE ENCASED UTILITY DUCT BANKS, PULL BOXES, AND TRANSFORMER PADS. TRANSFORMERS, WIRING, AND ANY ADDITIONAL SERVICE EQUIPMENT (NOT INCLUDING THE BRIDGE) WILL BE INSTALLED BY OTHERS.

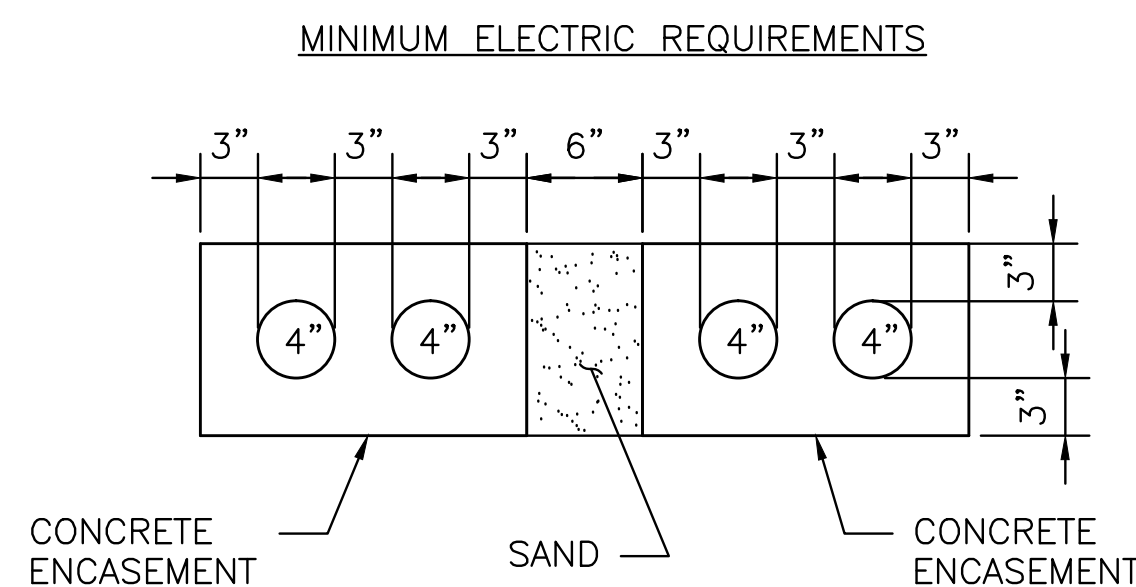
OAK BLUFFS - TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	27	254
PROJECT FILE NO.: 604029			

UTILITY DETAILS



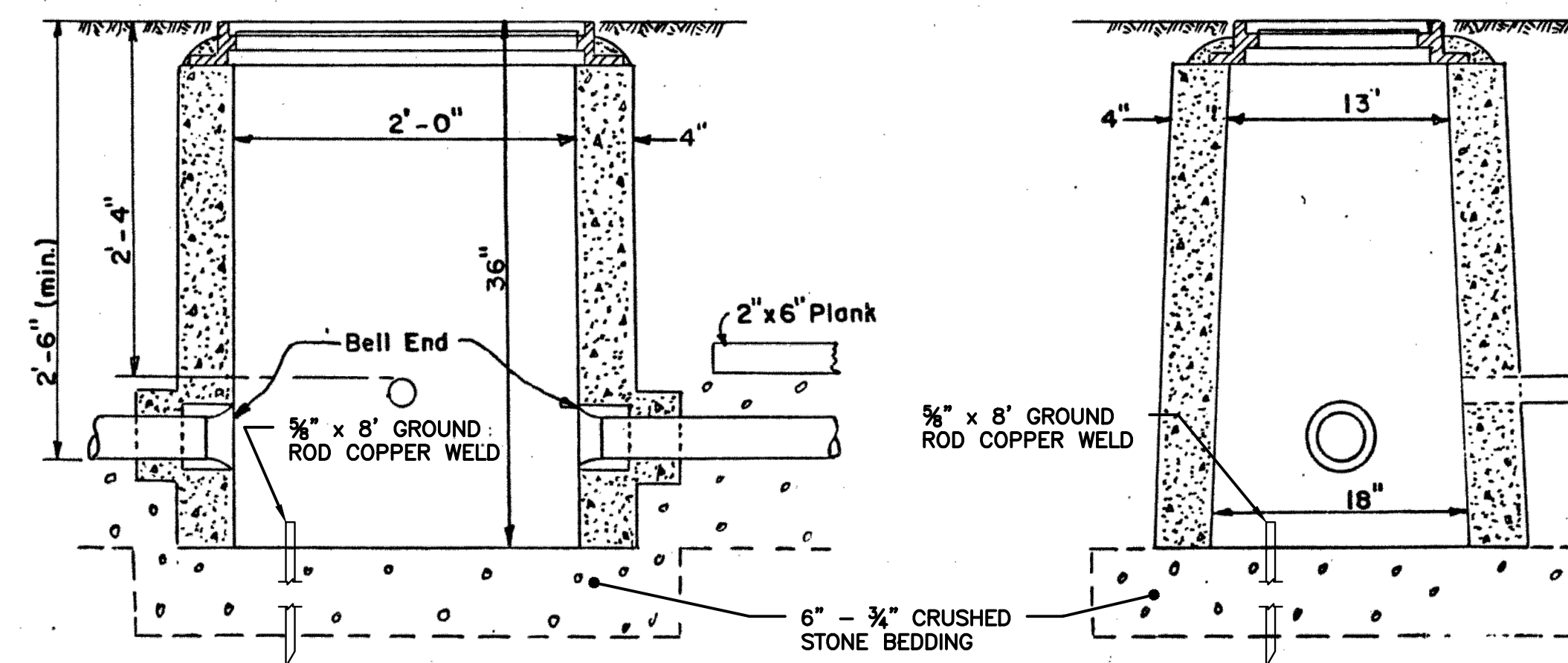
TYPICAL TRENCH/EXCAVATION AT SIDEWALK
SCALE: NTS



NOTES:

1. CONCRETE ENCASEMENT AS REQUIRED PER D3820 SECTION VII STANDARD C1100 FOR STATE ROADS. TYPICAL CONDUIT BANK SHALL BE ENCASED.

UTILITY ENCASEMENT DETAIL
SCALE: NTS



24\"/>

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	28	254
PROJECT FILE NO.: 604029			

UTILITY DETAILS

2'-0" x 3'-0" VERIZON FLAT WALL PULL BOX x 36" DEEP

NOTES:

- CONCRETE IS DESIGNED FOR H-20-44 BRIDGE LOADING USING 5,500 PSI COMPRESSIVE STRENGTH CONCRETE AND 60,000 PSI A-706 REINFORCING STEEL.
- COVER DESIGNED FOR PARKWAY LOADING 200 PSF. OR TRAFFIC H-20 LOADING.
- VAULT TO BE PLACED ON A 6" BASE OF CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.

RACKING PACKAGE:

14 HOLE CABLE RACKS W/ BOLTS = 4.

ORDERING INFORMATION:

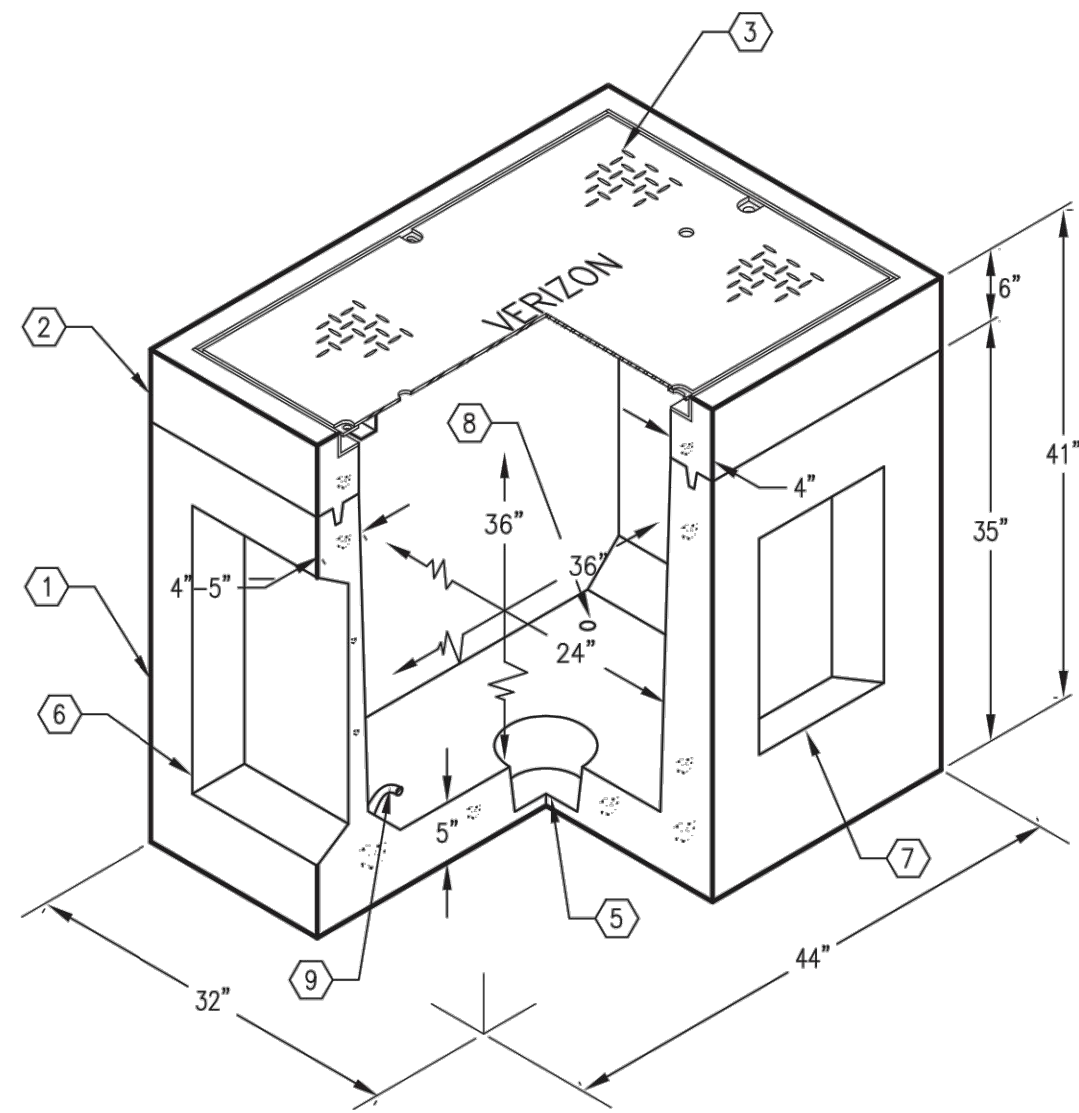
PER VERIZON SPECIFICATIONS.
TOTAL WEIGHT FOR ASSEMBLY AS SHOWN 1,521#.

PARKWAY ASSEMBLY WITH STEEL B/D COVER K2436-FP36-13P.

LIGHT TRAFFIC ASSEMBLY WITH STEEL B/D COVER K2436-FP36-13T.

GENERAL NOTES:

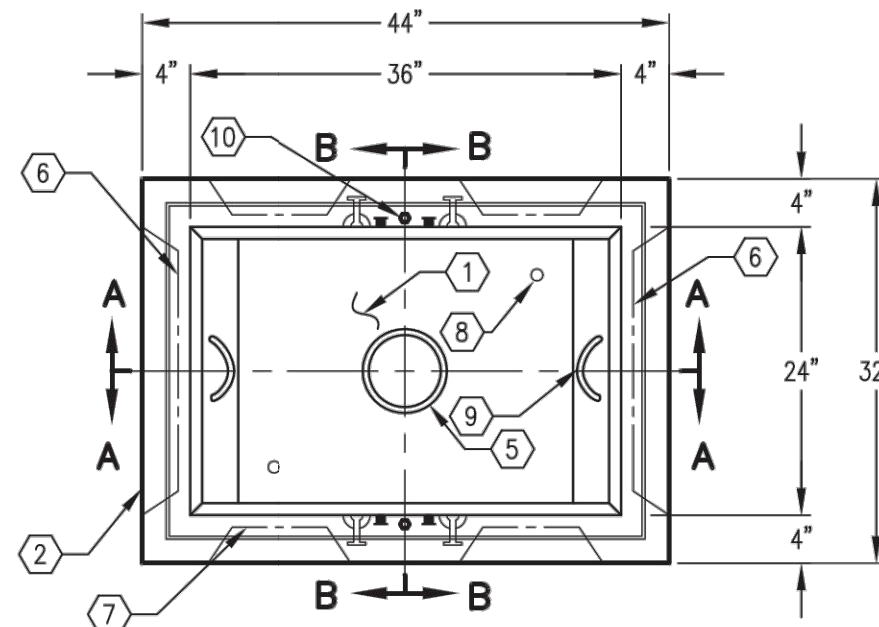
- Minimum soil bearing capacity is hereby assumed to be 2000 PSF unless otherwise documented by a geotechnical report that shall be provided to Jensen Precast by the end user. Jensen Precast shall not be held responsible for the soil bearing capacity.
- Installation of Manholes, Vaults, Handholes, Meter Boxes etc. will be as per Jensen installation procedures.
- Structural modification to the Jensen line of products is not permitted without prior written approval from Jensen Engineering Department.
- Do not scale the drawings, verify all dimensions including rough openings, if any discrepancies are found, notify the Jensen Engineer immediately.
- The Jensen Engineer will interpret the intent of the drawings in case of possible conflict or discrepancy.
- Permissible Variations:
Dimensional Tolerances – The length, width, height, or dia. measurements of the structure when measured on the inside surfaces shall not deviate from design dimensions by more than the following:
Dimensions: Tolerance:
0 to 5 Feet 1/4"
5 to 10 Feet 3/8"
10 to 20 Feet as agreed upon between the supplier and purchaser.
- Squareness Tolerance:
The inside of the precast concrete component shall be square as determined by diagonal measurements. The difference between such measurements shall not exceed the following:
Measured Length: Allowable Difference
0 to 10 Feet 1/2"
10 to 20 Feet 3/4"
20 Feet and over as agreed upon between the supplier and purchaser.



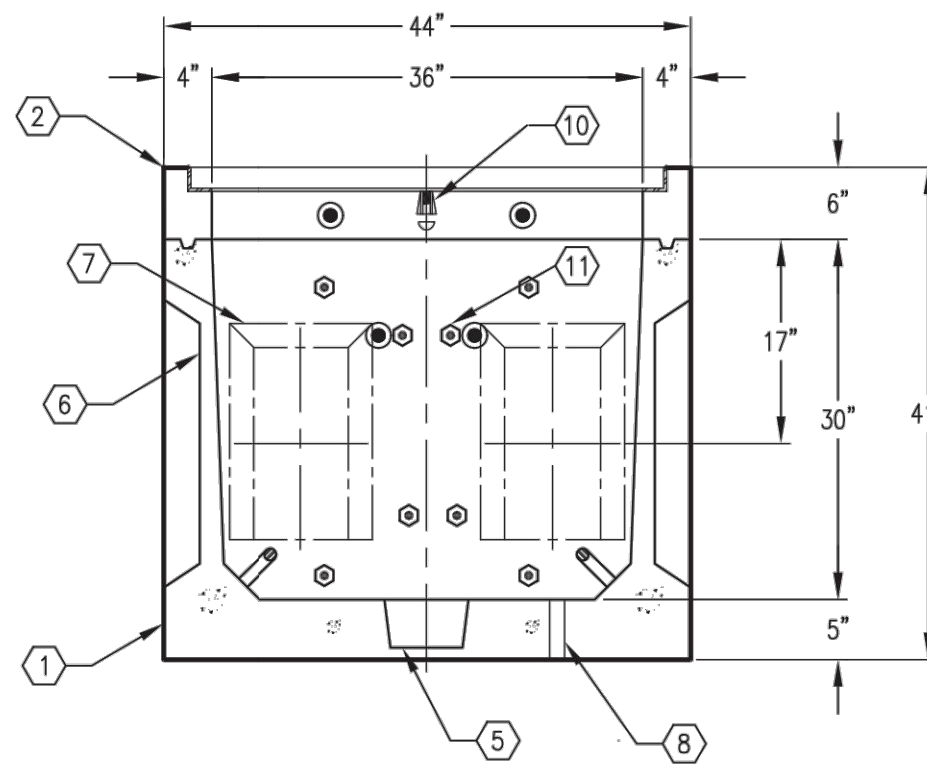
MINIMUM EXCAVATION SIZE:
3'-2" x 4'-8" x DEPTH REQ'D.

JENSEN
PRECAST
AUTOCAD REL. 14

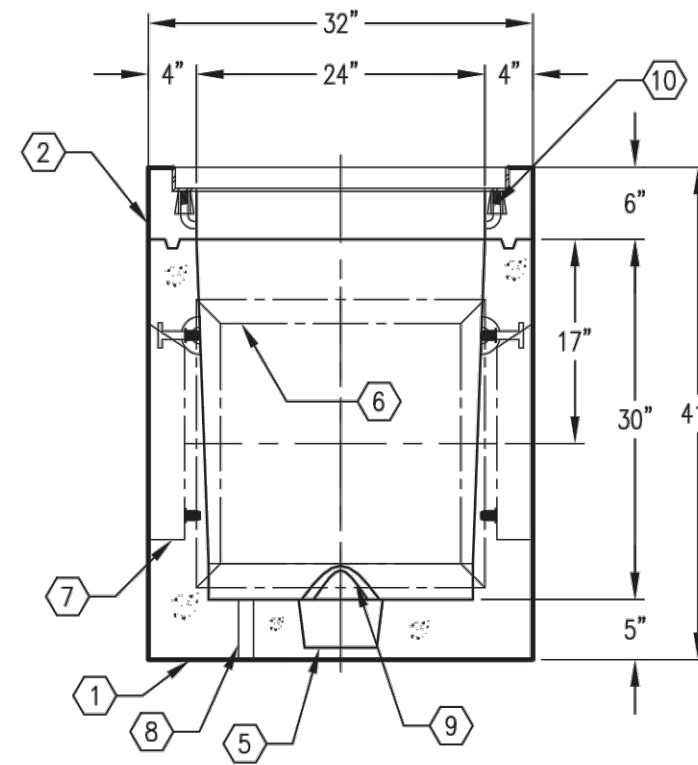
K2436-FP36-13
PER VERIZON SPECS. 03-01-02



PLAN VIEW



SECTION A-A



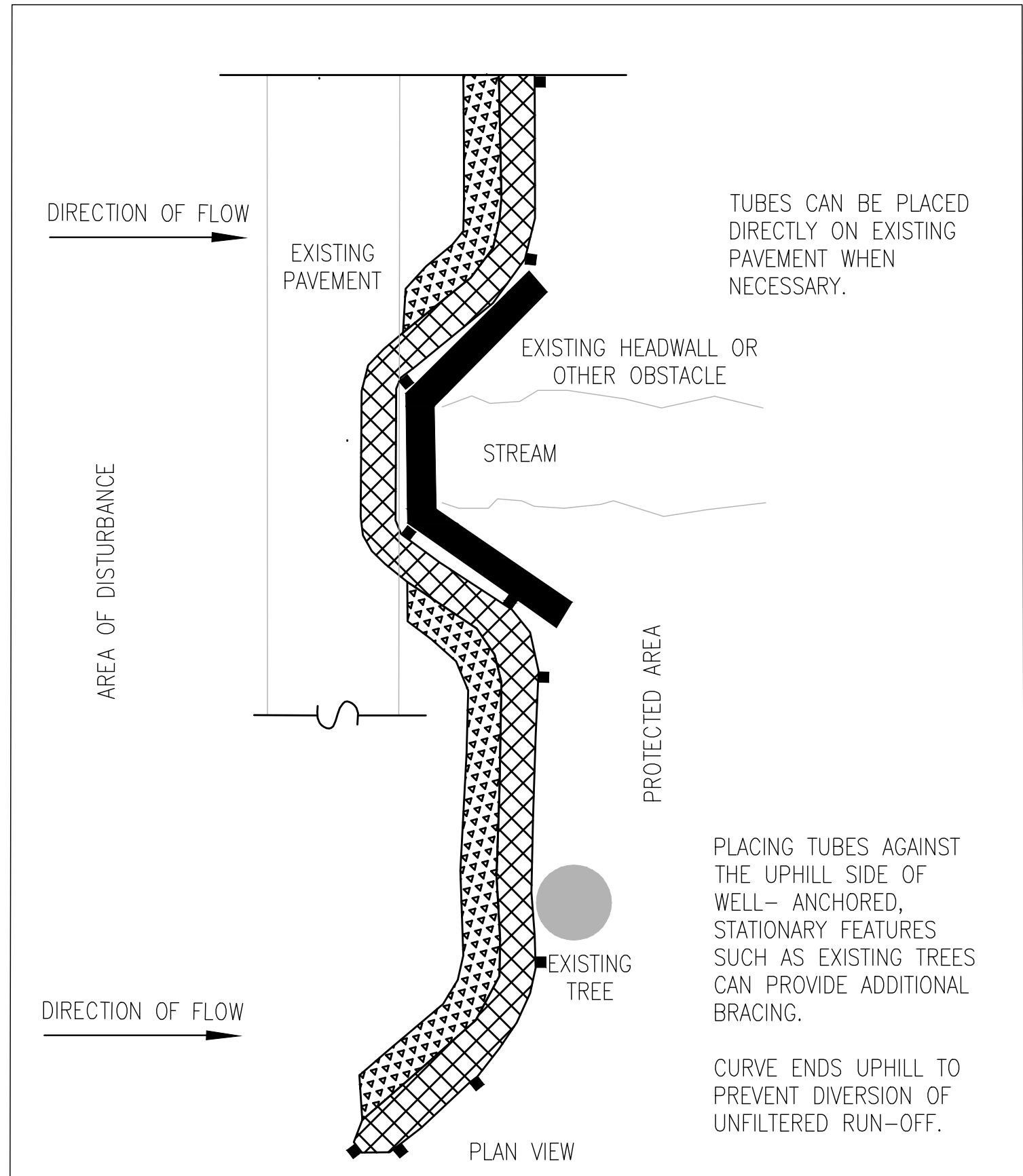
SECTION B-B

JENSEN
PRECAST

#	DATE	DESCRIPTION	BY

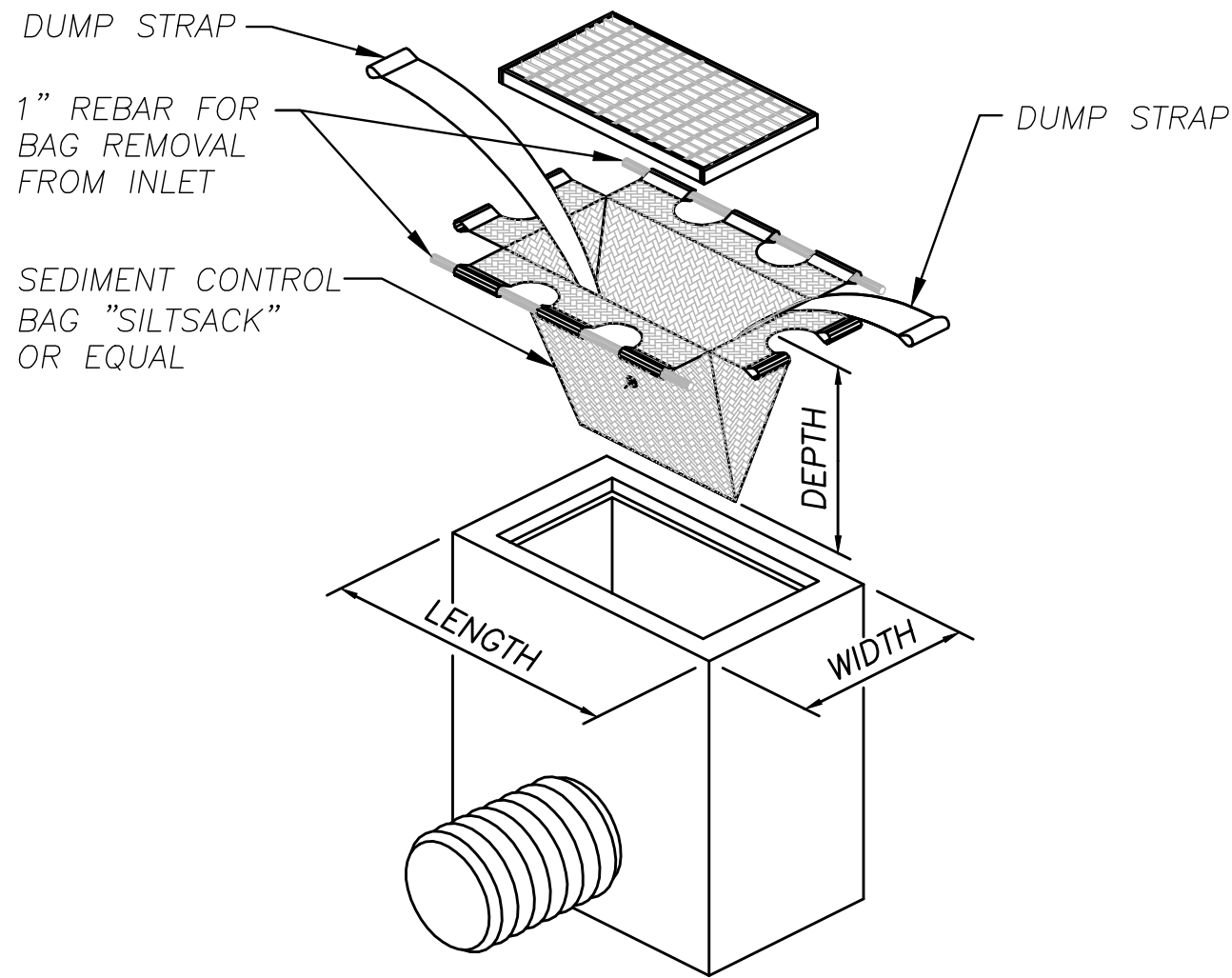
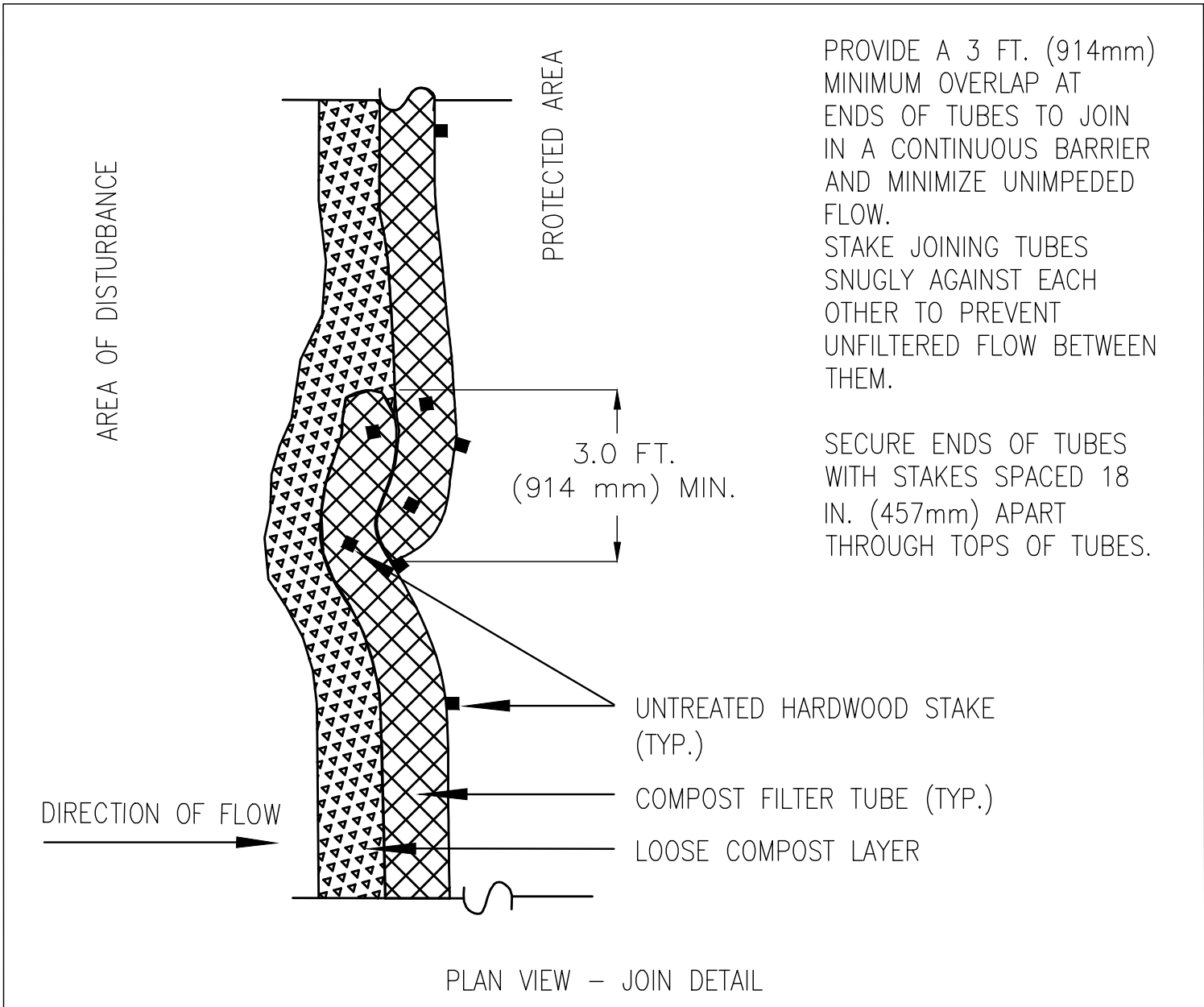
K2436-FP36-13
PER VERIZON SPECS. 03-01-02

File Name: B:\MassHighway\5466571_LagoonPond\cadd\Drawings\037_0329_ErosionControl.dwg
Plot Date: 10/17/2012 7:28 AM



GENERAL NOTES:

1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES (300mm) FOR SLOPES UP TO 50 FEET (15.24m) IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
4. CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.



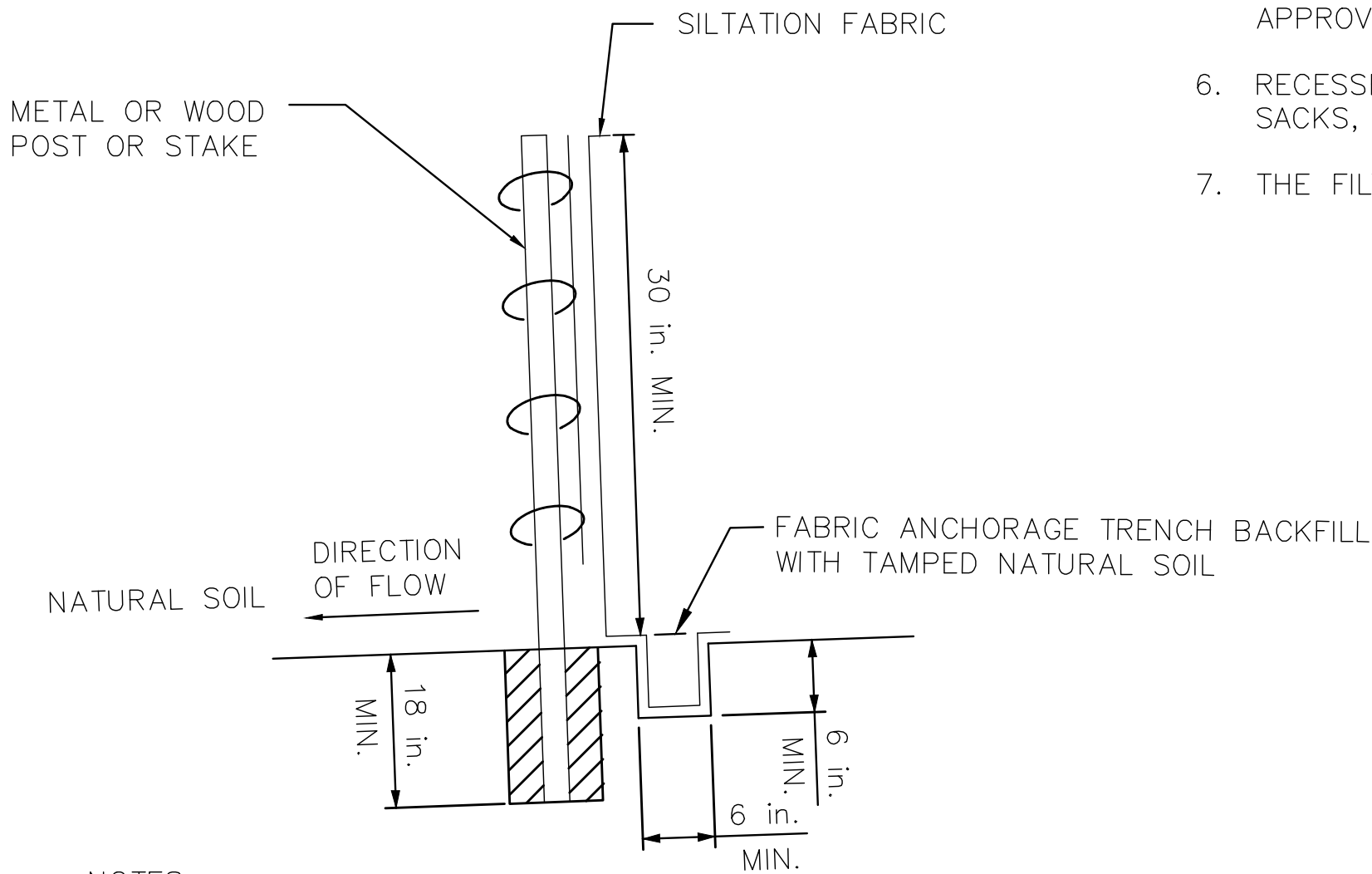
CB STYLE	LENGTH	WIDTH	DEPTH
TYPE 1 CB	24"	20"	VARIABLES
TYPE 1 CCI	29.5"	24"	VARIABLES
USA G2	32.5"	27.5"	VARIABLES

NOTES:

1. THE DIMENSION CHART ABOVE IS FOR STANDARD CATCH BASINS AND INLETS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE CORRECT SIZE DEVICE FOR EACH INLET.
2. FOR NON-STANDARD CATCH BASINS AND INLETS, THE CONTRACTOR SHALL MEASURE DIMENSIONS IN THE FIELD AND ORDER THE APPROPRIATE SIZE(S).
3. THE INLET SEDIMENT CONTROL DEVICE SHALL BE OF HIGH FLOW DESIGN (200 GAL/MIN/FT), AS PER THE MANUFACTURER'S SPECS.
4. THE SEDIMENT CONTROL DEVICE SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED A MINIMUM ONCE PER MONTH OR WITHIN THE 48 HOURS FOLLOWING A STORM EVENT. FILTER SHALL BE CLEANED IN A MANNER WHICH ENSURES THAT ALL SEDIMENT REMAINS ON SITE.
5. SUBSTITUTION OF A SHEET OF FILTER FABRIC PLACED OVER THE OPENING OF THE INLET IS NOT APPROVED.
6. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS, SIZE OF FILTER INLET SACK TO BE DETERMINED BY MANUFACTURER.
7. THE FILTER SHALL BE REPLACED OR CLEANED WHEN THE BAG BECOMES HALF FULL.

INLET SEDIMENT CONTROL DEVICE – SILT SACK

NOT TO SCALE



NOTES:

1. ATTACH FABRIC TO WIRE MESH WITH HOGGRINGS, STEEL POSTS WITH TIE WIRES, OR WOOD POSTS WITH STAPLES.
2. SPLICES SHALL BE MADE AT FENCE POSTS. FABRIC SHALL BE OVERLAPPED 6 in. AND SECURELY FASTENED.
3. POST SPACING SHALL BE A MAX. OF 4 FT O.C. WITHOUT SUPPORTING WIRE MESH OR 10FT O.C. WITH WIRE MESH
4. POSTS SHALL BE 2 in. DIAMETER WOOD OR STEEL WEIGHING NOT LESS THAN 1.3 lb/ft.

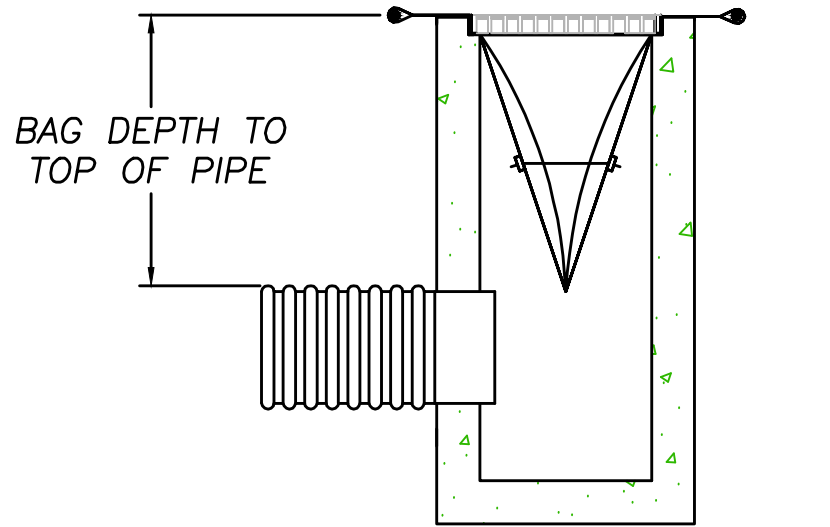
SILTATION FENCE DETAIL

NOT TO SCALE

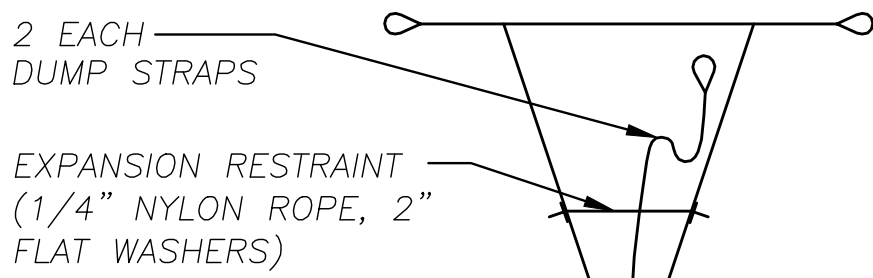
OAK BLUFFS – TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	29	254
PROJECT FILE NO.: 604029			

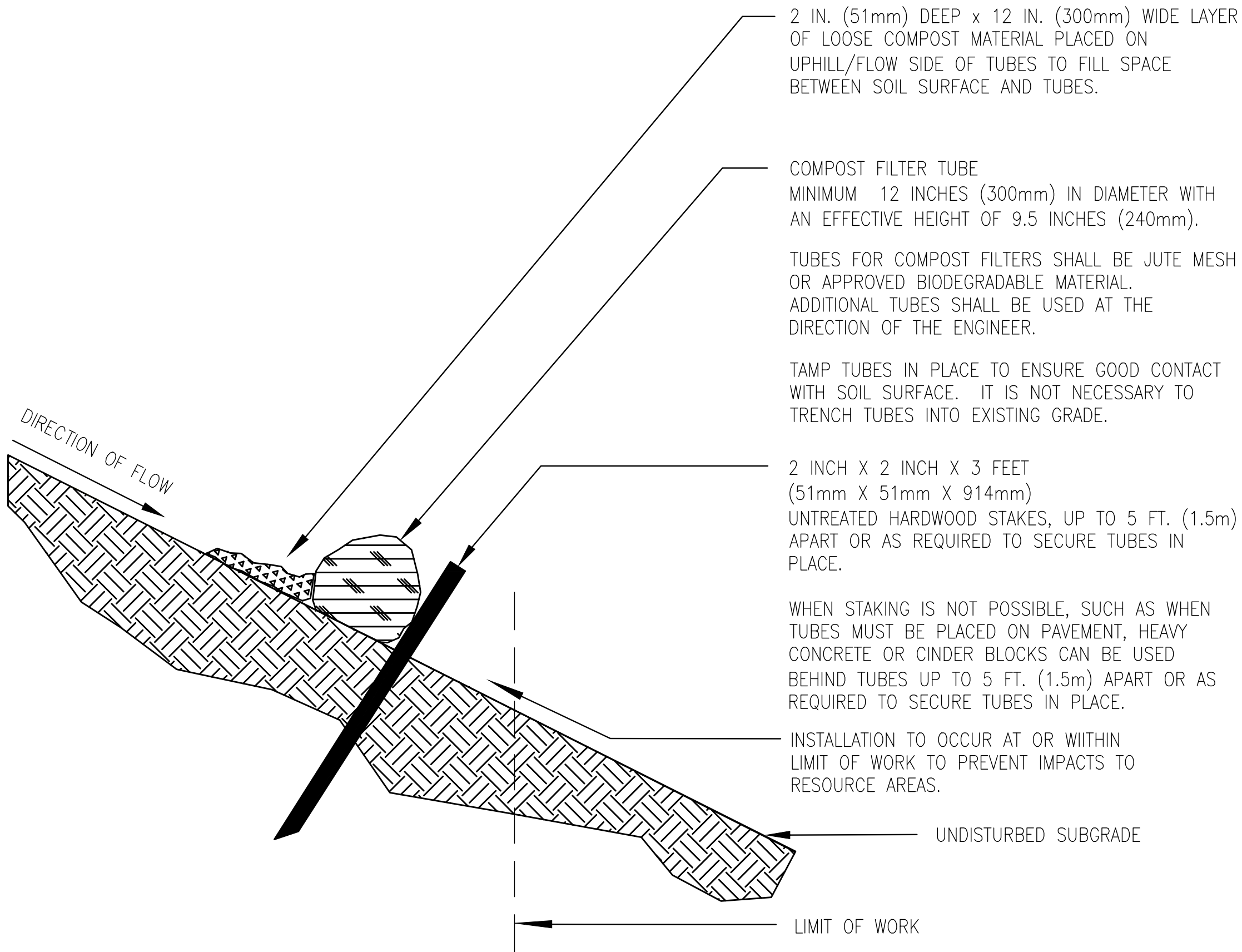
EROSION CONTROL DETAIL



INSTALLATION DETAIL

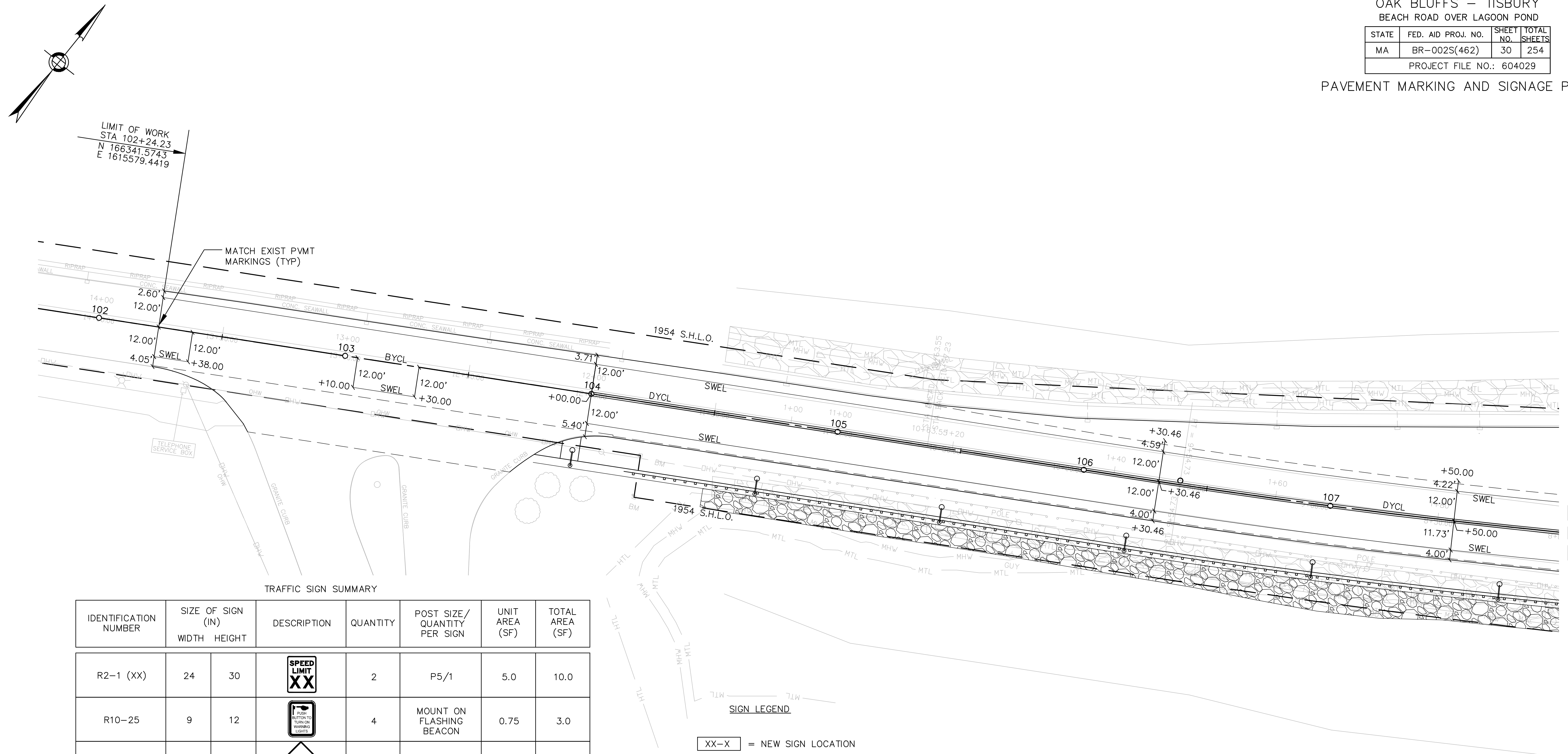


BAG DETAIL



COMPOST FILTER TUBE DETAILS

NOT TO SCALE



TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN (IN)		DESCRIPTION	QUANTITY	POST SIZE/ QUANTITY PER SIGN	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT					
R2-1 (XX)	24	30		2	P5/1	5.0	10.0
R10-25	9	12		4	MOUNT ON FLASHING BEACON	0.75	3.0
W3-6	36	36		2	P5/1	9.0	18.0
W11-2	30	30		12	P5/1	6.25	25.0
W16-2a	24	12		4	MOUNT WITH W11-2	2.00	6.00
W16-7PL	24	12		8	MOUNT ON FLASHING BEACON	2.0	8.0
R7-1	12	18		2	P5/1	1.5	3.0
SP-1	12	18		6	P5/1	1.5	9.0
SP-2	30	15		2	P5/1	3.125	6.25

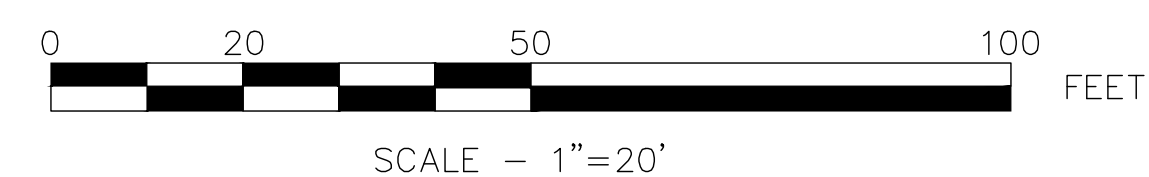
SIGN LEGEND

XX-X = NEW SIGN LOCATION

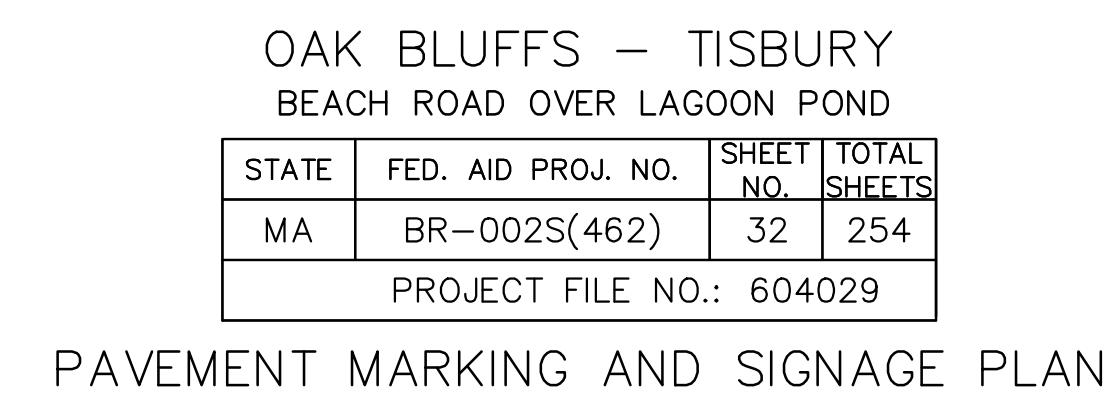
XX-X = R&R LOCATION

NOTES:

- ALL WARNING, REGULATORY AND ROUTE MARKERS SHALL BE FABRICATED WITH HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING (SEE SECTION M9.30.0) TYPE III OR IV.
- ALL SIGNS NOTED AS "(R&R)" SHALL BE MOUNTED ON NEW P5 POSTS OR AS OTHERWISE INDICATED.
- ALL P5 POSTS SHALL BE TELESCOPIC BREAKAWAY RECTANGULAR TYPE POSTS.
- ALL STOP AND YIELD SIGNS PROPOSED IN THIS CONTRACT ARE SUBJECT TO FIELD INVESTIGATION BY THE DISTRICT OFFICE OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION TO JUSTIFY WARRANTS BEFORE INSTALLATION.



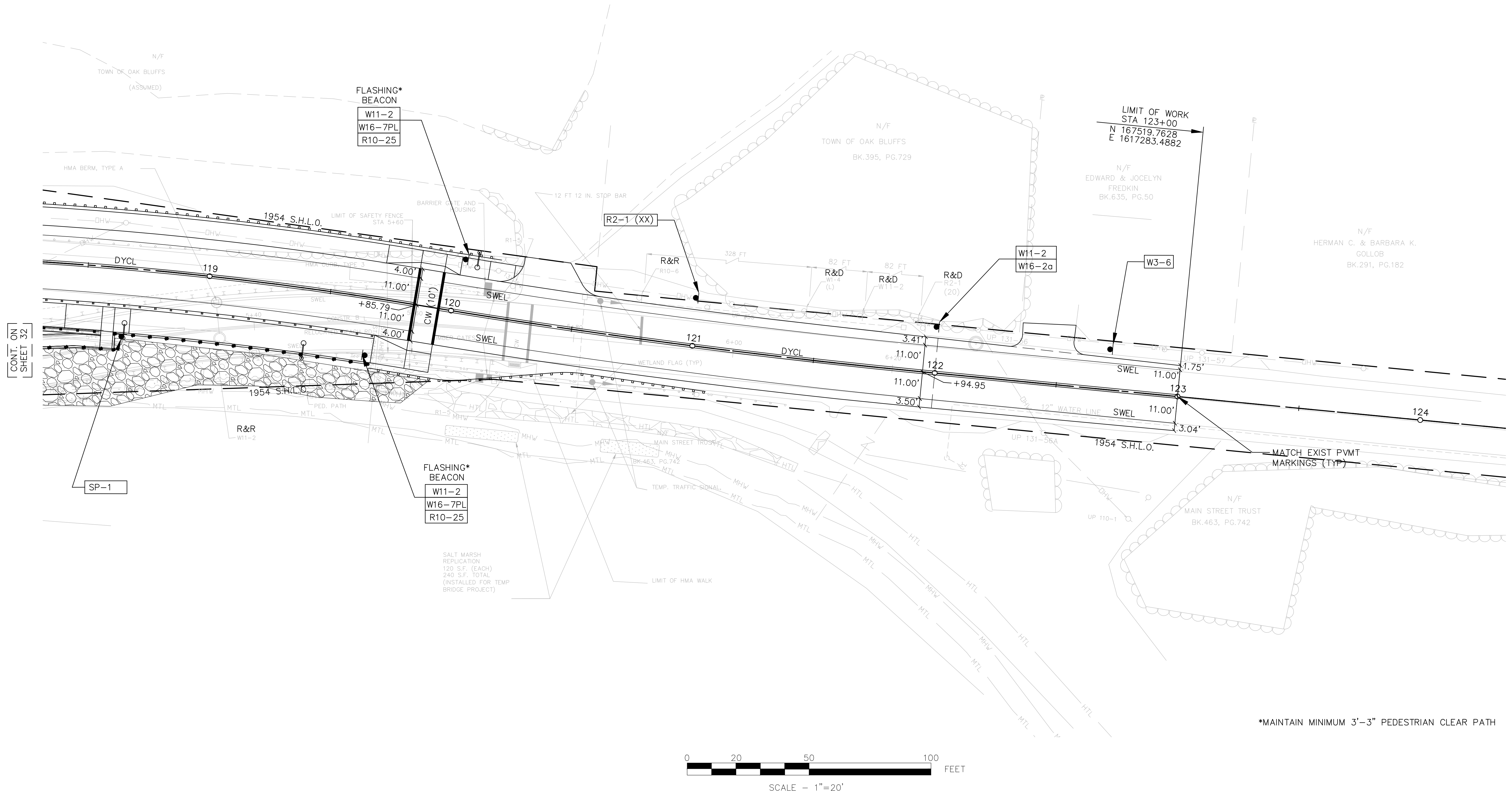
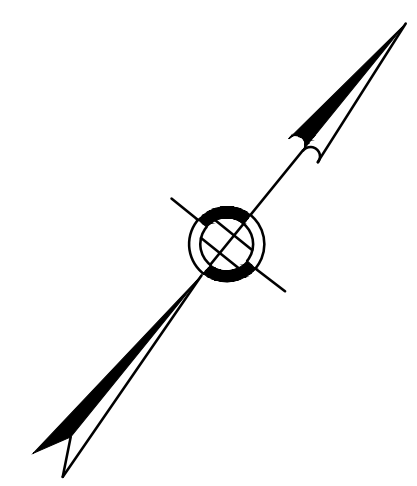
CONT. ON
SHEET 31

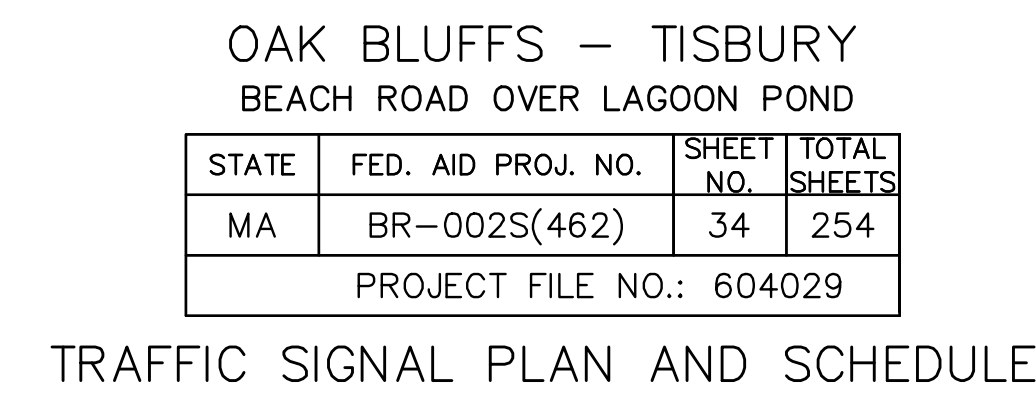


OAK BLUFFS — TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	33	254
PROJECT FILE NO.: 604029			

PAVEMENT MARKING AND SIGNAGE PLAN





			01			02			03			04		
														
STREET	DIR.	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12
BEACH RD.	EB	A, B	G	Y	R				R					
BEACH RD.	WB	C, D	G	Y	R				R					
TIMING IN SECONDS														
MINIMUM INITIAL			7						30					
CHANGE				4	10									
MAXIMUM			—						—					

PROPOSED
SIGNALS



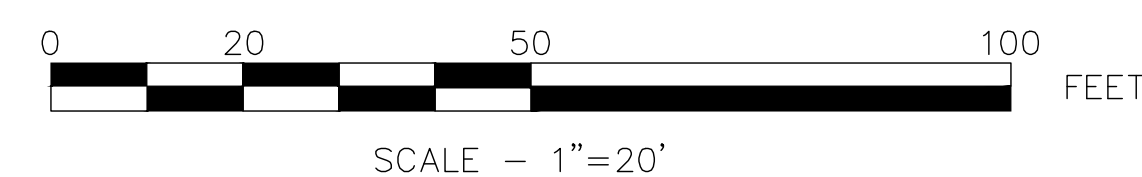
A, B

TRAFFIC SIGNAL MAJOR ITEMS REQUIRED

1	CONTROLLER, MOUNTED INSIDE BUILDING
1	SERVICE CONNECTION
4	10FT SIGNAL POST, BASE, AND FOUNDATION
4	SIGNAL HEAD, 3 SECTION (ALL LED)
4	PULL BOX (12IN X 12IN)
	PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIALS NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.

NOTES:

1. PHASE 3 SHALL BE PUSH BUTTON ACTIVATED FROM WITHIN THE BRIDGE TENDER HOUSE AND SHALL REMAIN ACTIVATED UNTIL PHASE I IS ACTIVATED BY PUSH BUTTON.



TEMPORARY TRAFFIC CONTROL NOTES

GENERAL

- ALL TEMPORARY TRAFFIC CONTROL PLANS AND WORK ZONE TRAFFIC CONTROL MEASURES SHALL CONFORM TO THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), THE STANDARD SPECIFICATIONS, AND THE FOLLOWING NOTES.
- THE TEMPORARY TRAFFIC CONTROL PLANS CONTAINED HEREIN ARE GIVEN AS A GUIDE FOR TYPICAL WORK ZONE TRAFFIC CONTROL APPLICATIONS FOR THE TYPES OF WORK ANTICIPATED FOR THIS PROJECT. THEY ARE NOT INTENDED TO COVER ALL POSSIBLE CONSTRUCTION OPERATIONS WHICH THE CONTRACTOR MAY CHOOSE TO EMPLOY. WORK ZONE TRAFFIC CONTROL FOR OTHER CONSTRUCTION OPERATIONS OR OTHER TRAFFIC SITUATIONS IF APPLICABLE SHALL BE IN ACCORDANCE WITH THE 2009 M.U.T.C.D. AND AS APPROVED OR DIRECTED BY THE ENGINEER.
- LANE RESTRICTIONS MAY NOT REMAIN OVERNIGHT OR DURING NON-WORKING HOURS. AFTER EACH WORKING DAY, TRAFFIC CONTROL DEVICES THAT ARE NOT REQUIRED SHALL BE MOVED OFF THE ROADWAY OR FULL DEPTH CONSTRUCTION AREA AND PLACED SO AS NOT TO IMPEDE PEDESTRIAN AREAS, ABUTTER ACCESS OR CAUSE CONFUSION TO MOTORISTS. IN CERTAIN CIRCUMSTANCES, AND ONLY WITH THE APPROVAL OF MASSDOT AND THE ENGINEER, CAN LANE RESTRICTIONS REMAIN OVERNIGHT.
- CONTRACTOR SHALL PROVIDE A SAFE TEMPORARY PEDESTRIAN ACCESS WHERE EXISTING SIDEWALKS OR OTHER PEDESTRIAN AREAS ARE AFFECTED BY CONSTRUCTION WORK. MAINTAIN ABUTTER ACCESS AT ALL TIMES EXCEPT FOR SHORT PERIODS APPROVED BY THE ENGINEER.
- PLACE ALL CONSTRUCTION SIGNING, TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS FOR EACH PHASE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ONE (1) THRU TRAVEL LANE HAVING A MINIMUM WIDTH OF 11 ft SHALL BE PROVIDED IN EACH DIRECTION DURING ALL PHASES OF CONSTRUCTION AS SHOWN ON THE TRAFFIC MANAGEMENT PLANS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- WHEN WORK INFRINGES UPON THE TRAVELED WAY, WORK SHALL BE RESTRICTED TO OFF-PEAK HOURS ONLY. (NORMALLY 9.00am to 4.00pm, MONDAY TO FRIDAYS AND BETWEEN SEPT. 15TH AND MAY 15TH.)
- TAPER LENGTH FORMULAE FOR CHANNELIZATION DEVICES: $L = W \times S$ FOR SPEED EQUAL TO OR GREATER THAN 45 M.P.H. $L = W \times S^2 / 60$ FOR SPEED EQUAL TO OR LESS THAN 40 M.P.H. WHERE: L = MIN. LENGTH OF TAPER, S = POSTED SPEED (M.P.H.), W = OFFSET WIDTH (FEET).
- ADVISORY SPEED LIMIT, IF USED, SHALL BE SET IN THE FIELD BY THE ENGINEER. W13-1 PLATES SHALL BE USED WHERE APPROPRIATE.
- FLASHING ARROW PANEL SHALL BE SET IN "ARROW MODE" WHEN USED FOR ACTUAL LANE CLOSURES ONLY. FOR SHOULDER CLOSURES, BULBS TO BE ILLUMINATED IN A NON-DIRECTIONAL CAUTION CONFIGURATION TO AVOID UNNECESSARY LANE SHIFTS.
- DISTANCES SHOWN ON THE TRAFFIC MANAGEMENT PLANS ARE A GUIDE ONLY, AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.

GRADE DIFFERENCES

- WHERE THERE IS A LONGITUDINAL DIFFERENCE IN ELEVATION BETWEEN EXISTING PAVEMENT AND COLD PLANED OR NEW PAVEMENT, THE CONTRACTOR SHALL PATCH A TEMPORARY BIT. CONC. WEDGE WITH A 12:1 (OR FLATTER) SLOPE FOR SMOOTH TRANSITION. SEE DETAIL, THIS SHEET.
- CROSS-SECTIONAL GRADE DIFFERENCES IN EXCESS OF 2in DURING NON-WORKING HOURS WILL REQUIRE DELINEATION BY USE OF REFLECTORIZED DRUMS.
- CROSS-SECTIONAL GRADE DIFFERENCES IN EXCESS OF 4in DURING NON-WORKING HOURS SHALL BE PROTECTED BY BACKFILLING WITH A WEDGE OF EARTHWORK TO BE COMPACTED AT 4:1 SLOPE AND WILL ALSO REQUIRE DELINEATION BY USE OF DRUMS.
- A MINIMUM SLOPE OF 4:1 MUST BE MAINTAINED AFTER WORKING HOURS DURING SUBBASE AND BASE COURSE INSTALLATION ALONG EDGE OF THE TRAVELWAY (SEE DETAIL, THIS SHEET). A MINIMUM SLOPE OF 8:1 MUST BE MAINTAINED ON ALL ABUTTER ACCESS DRIVES AND A MINIMUM SLOPE OF 12:1 MUST BE MAINTAINED ON ALL SIDEWALKS.

CONSTRUCTION SIGNING

- THE FIRST CONSTRUCTION SIGN IN A SERIES ON EACH APPROACH TO THE PROJECT SHALL BE FLUORESCENT ORANGE, HIGH PERFORMANCE (OR HIGH INTENSITY) SHEETING.
- ALL CONSTRUCTION SIGNS SHALL BE BLACK LEGEND ON A REFLECTORIZED ORANGE BACKGROUND UNLESS OTHERWISE NOTED.
- CONSTRUCTION SIGNING SHOWN ON THE ADVANCE SIGNING PLAN CAN REMAIN IN PLACE FOR THE ENTIRE PROJECT DURATION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- STANDARD ORANGE OR FLUORESCENT RED-ORANGE FLAGS (16in x 16in MIN.) SHALL BE ATTACHED TWO (2) EACH ON ALL ADVANCE WARNING SIGNS. FLAGS SHALL NOT INTERFERE WITH A CLEAR VIEW OF THE SIGN FACE.
- EXISTING GUIDE SIGNS SHALL BE TEMPORARILY RESET AS DIRECTED BY THE ENGINEER.
- ALL SIGNS, INCLUDING EXISTING, THAT ARE NOT REPRESENTATIVE OF ACTUAL WORK CONDITIONS SHALL BE EITHER COVERED OR REMOVED WHEN NOT APPLICABLE.
- IF USED, ALL W20-4 AND W20-5 SIGNS SHALL BE TAKEN DOWN OR COVERED AT THE CLOSE OF EACH DAY UNLESS LANE RESTRICTIONS ARE PERMITTED TO REMAIN OVERNIGHT IN ACCORDANCE WITH NOTE NO. 3 ABOVE.
- USE W20-8 OR W20-7a SIGNS ONLY WHILE POLICE OR FLAGGERS ARE DIRECTING TRAFFIC. THEY SHALL BE TAKEN DOWN OR COVERED AT THE CLOSE OF EACH DAY.

PAVEMENT MARKINGS

- PAVEMENT MARKINGS WHICH ARE NO LONGER APPLICABLE SHALL BE REMOVED. APPLY TEMPORARY MARKINGS WHERE SHOWN ON THE TRAFFIC MANAGEMENT PLANS.
- ON PROJECTS WHERE PAVEMENT OVERLAY IS NOT DESIGNATED, EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH TEMPORARY TRAFFIC CONTROLS SHOULD BE COVERED TEMPORARILY WITH BLACKOUT TAPE, AS DIRECTED BY THE ENGINEER. FOR THE FULL DURATION OF THE PHASE IN PROGRESS, TEMPORARY PAINTED OR REMOVABLE TAPE MARKINGS SHALL BE USED AS NECESSARY FOR ALL PHASES OF CONSTRUCTION.

CHANNELIZATION

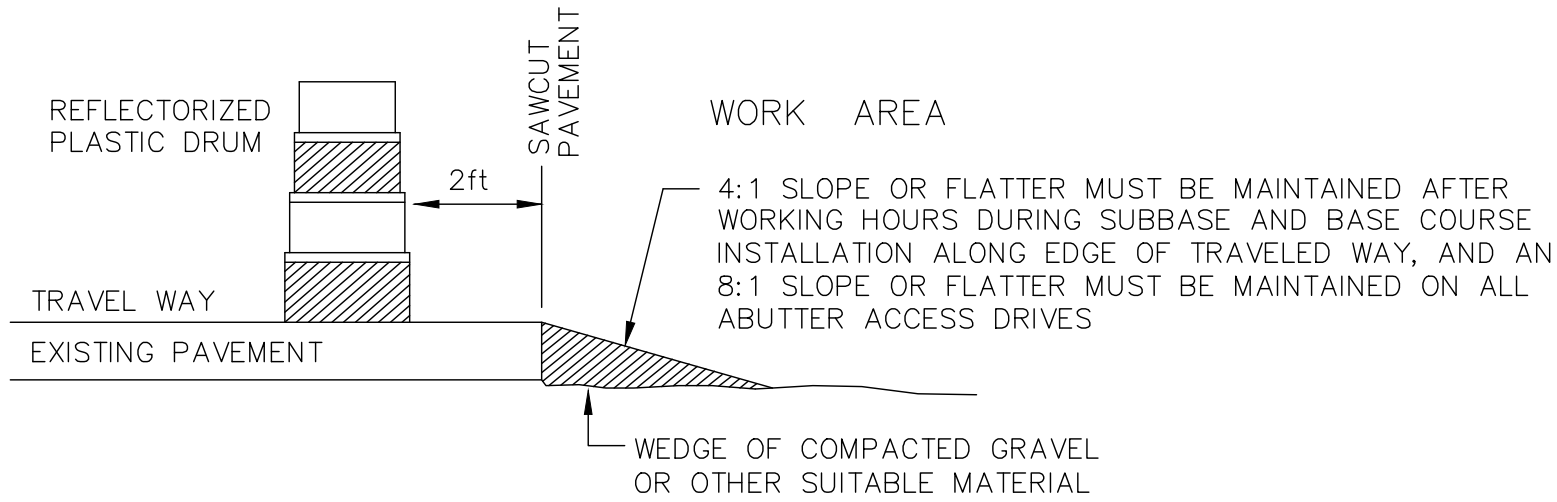
- REFLECTORIZED CONES SHALL BE MINIMUM 28 IN HIGH, 36 IN CONES ARE RECOMMENDED.
- FLASHING OR STEADY BURN WARNING LIGHTS CAN BE USED ON BARRICADES, JERSEY BARRIERS OR WHERE DIRECTED BY THE ENGINEER.
- METAL DRUMS ARE PROHIBITED AS CHANNELIZATION DEVICES.
- PLASTIC DRUMS WITH SOME FORM OF LIGHTING DEVICE MOUNTED ON THEM MUST PASS THE CRITERIA SET FORTH IN NCHRP 350 "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES." IF THEY DO NOT MEET THIS CRITERIA, THEY MUST BE REMOVED FROM THE PROJECT.
- TEMPORARY IMPACT ATTENUATORS MUST MEET THE PERFORMANCE STANDARDS OF NCHRP 350.

OAK BLUFFS – TISBURY

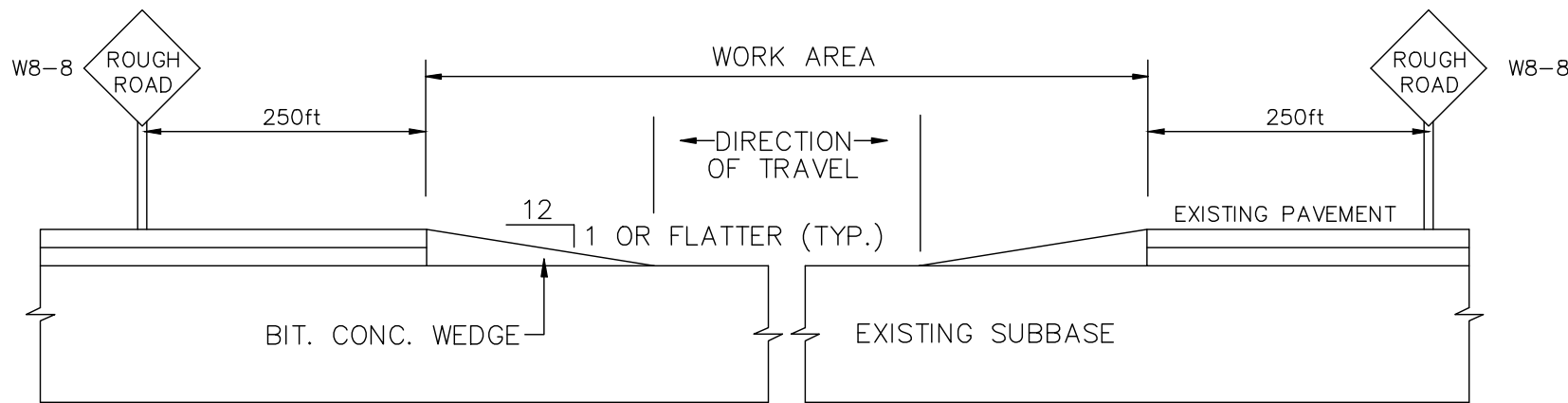
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	35	254
PROJECT FILE NO.: 604029			

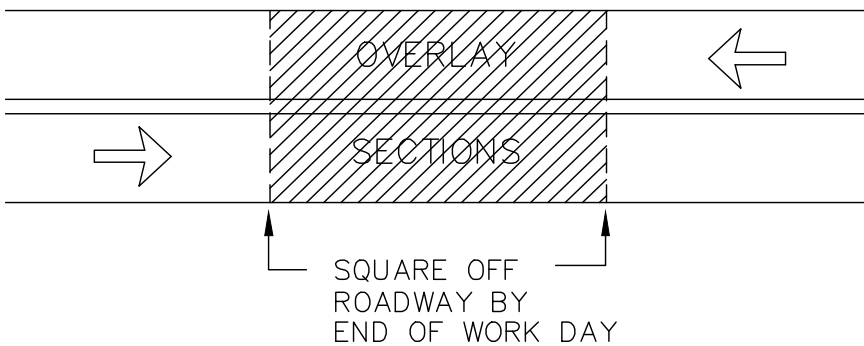
TEMPORARY TRAFFIC CONTROL PLAN



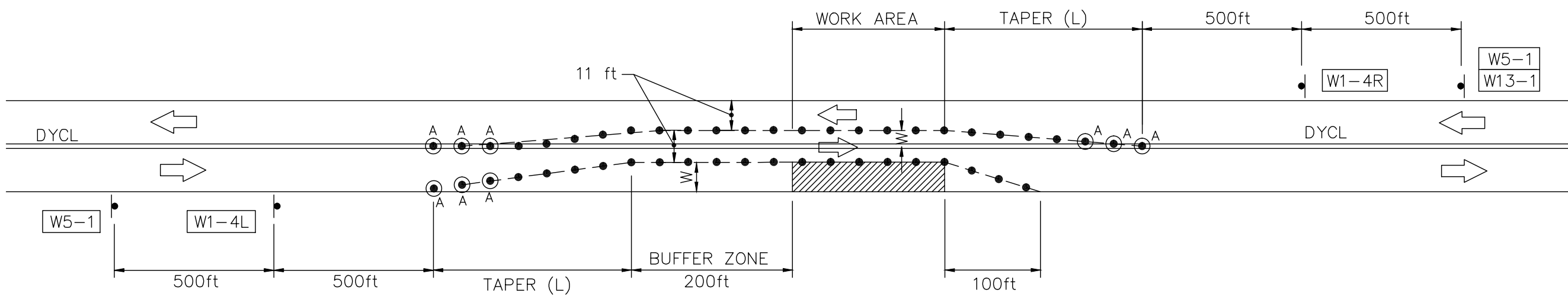
AFTER WORK HOURS TREATMENT FOR LATERAL SLOPING



TEMPORARY RAMP

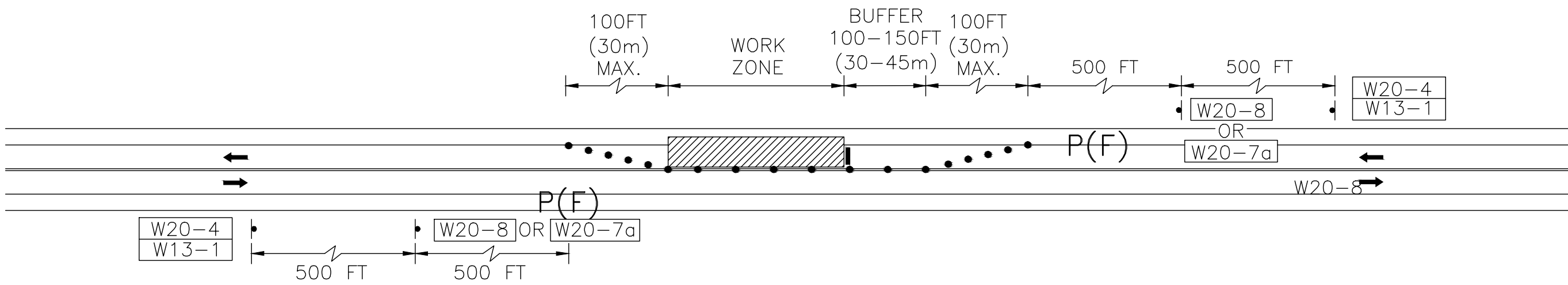


AFTER WORK HOURS TREATMENT FOR AREAS RECEIVING OVERLAY



PARTIAL RIGHT LANE CLOSURE

TWO LANE ROADWAY WITH PARTIAL LANE CLOSURE
NOT TO SCALE



ALTERNATING TRAFFIC WITH POLICE DETAIL

TWO LANE ROADWAY ONE WAY ALTERNATING TRAFFIC WITH POLICE CONTROL
NOT TO SCALE

LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- REFLECTORIZED DRUM (OR CONE)
- CONSTRUCTION SIGN
- REFLECTORIZED DRUM WITH TYPE 'A' FLASHING WARNING LIGHT
- POLICE OFFICER OF FLAGGER CONTROL

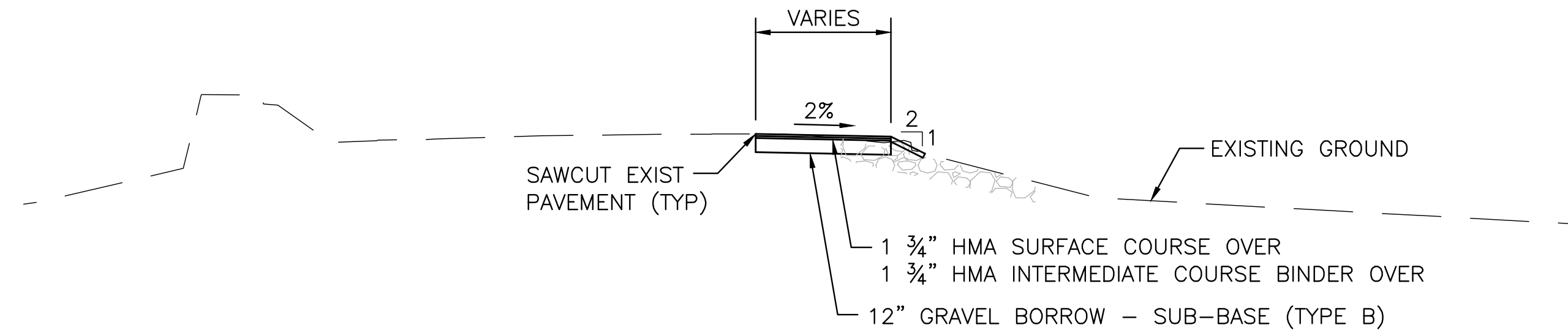
GENERAL NOTE:

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING POWER TO THE TEMPORARY BRIDGE AND NAVIGATION LIGHTS AT ALL TIMES DURING PHASE I & II.

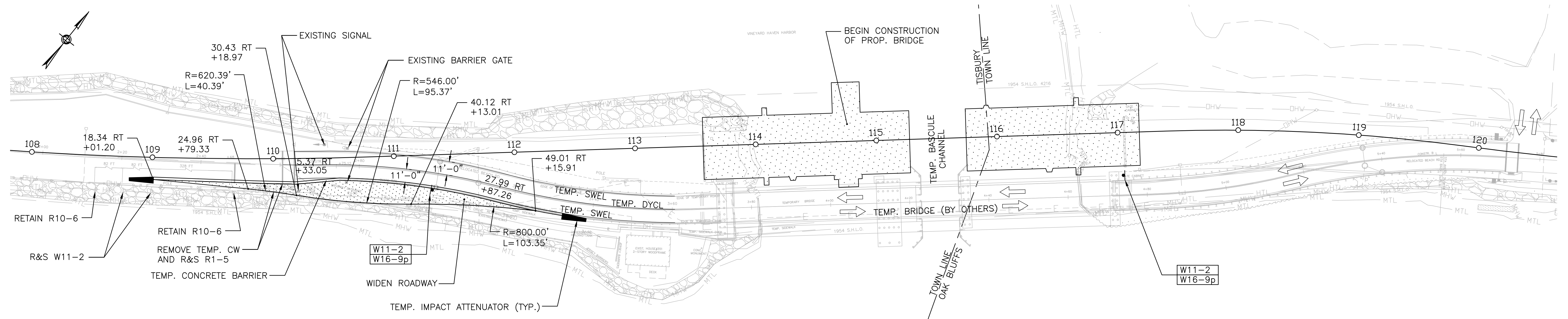
OAK BLUFFS – TISBURY BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	37	254
PROJECT FILE NO.: 604029			

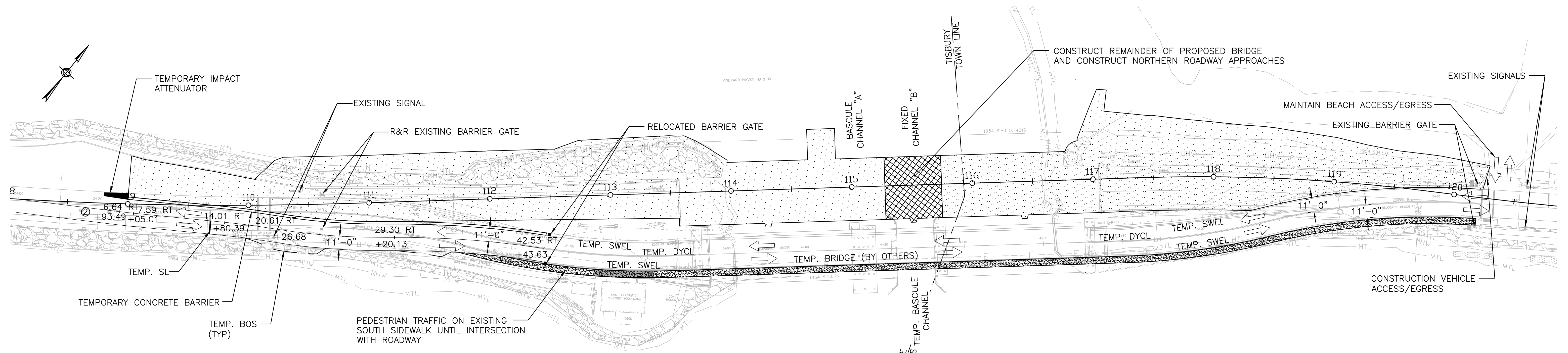
TEMPORARY TRAFFIC CONTROL PLAN



TYPICAL TEMPORARY WIDENING
NTS



PHASE I



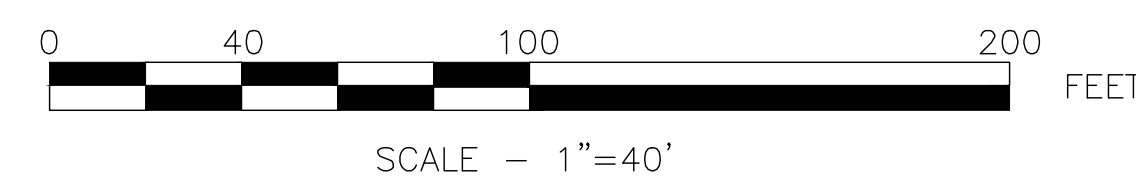
PHASE II

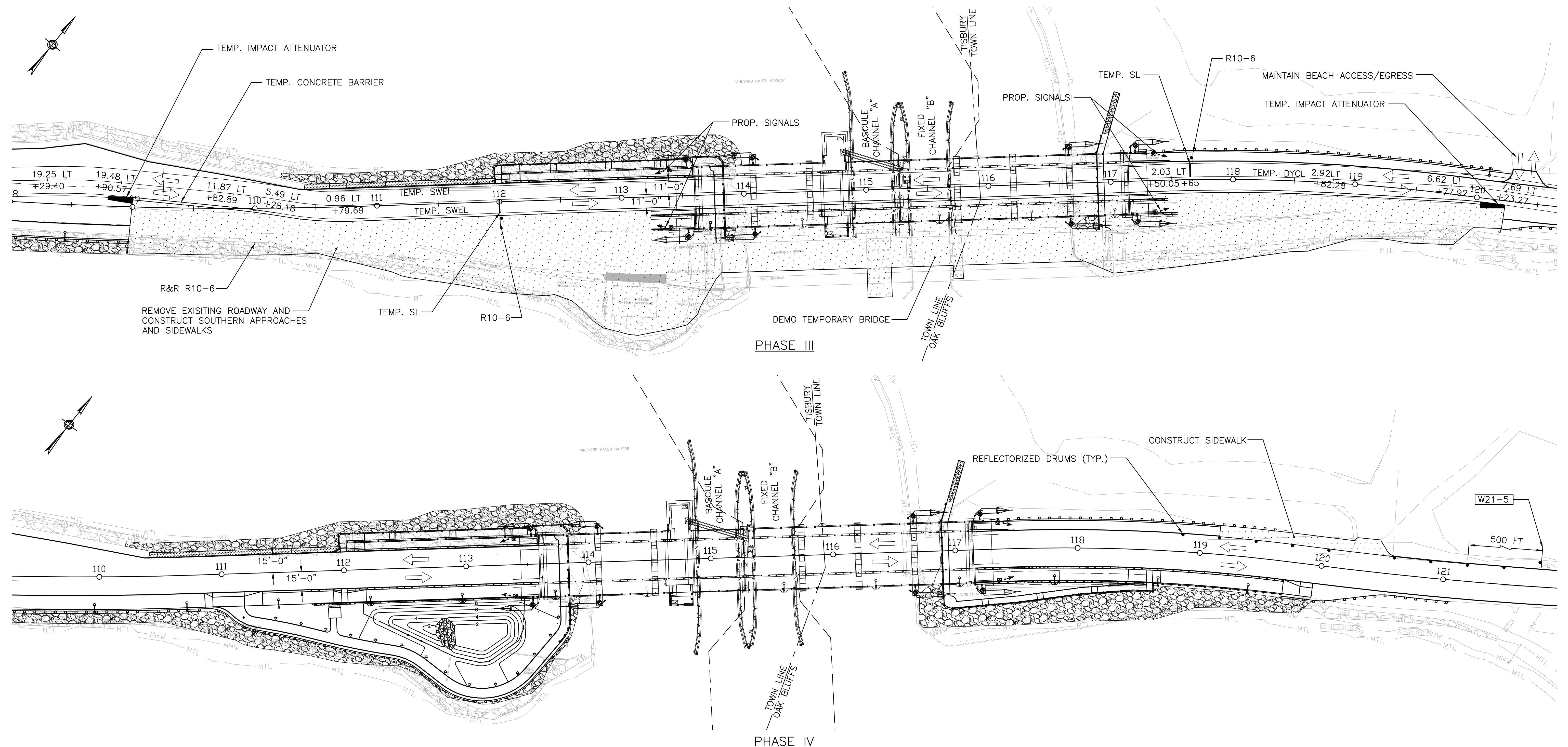
PHASE I:

- BEGIN CONSTRUCTION OF PROPOSED BRIDGE SPANS 1-4 AND SPANS 6-8.
- RE-STRIPE WESTERN APPROACH FROM EXISTING 12' LANES TO 11' LANES AND THEN WIDEN SOUTHWESTERN PORTION OF ROADWAY TO ACCOMMODATE TRAFFIC IN PHASE II. WIDENING WILL REQUIRE SAWCUTTING INTO EXISTING PAVEMENT AT STA. 109+01.20 TO 112+49.01.
- TEMPORARY WIDENING TO BE USED IN PHASE II.

PHASE II:

- CONTINUE CONSTRUCTION OF PROPOSED BRIDGE, CONSTRUCT NORTHERN SIDE RETAINING WALLS, SEAWALL, NORTHERN EMBANKMENTS, PIERS, PORTION OF FENDERS. SHEETING WILL BE REQUIRED BETWEEN PROPOSED AND EXISTING ROADWAY DURING CONSTRUCTION WHERE ADEQUATE SLOPES ARE NOT ATTAINABLE (STA. 110+00 TO 112+25± AND 118+00 TO 119+75±). CONSTRUCT AS MUCH OF THE SOUTHWEST RETAINING WALL AS POSSIBLE.
- SHIFT TRAFFIC ON WESTERN APPROACH TO WIDENED ROADWAY. MAINTAIN STRIPING ON TEMPORARY BRIDGE AND ON EASTERN APPROACH.
- REMOVE CROSSWALK AND CROSSWALK SIGNS ON WESTERN APPROACH. PEDESTRIANS MAINTAINED ON TEMPORARY BRIDGE/ROADWAY SIDEWALK.
- CONSTRUCT FIXED CHANNEL SPAN, SPAN 5, THAT ALIGNS WITH TEMPORARY DRAWBRIDGE. POND CLOSED TO BOAT TRAFFIC REQUIRING BRIDGE OPENING DURING SPAN 5 CONSTRUCTION.



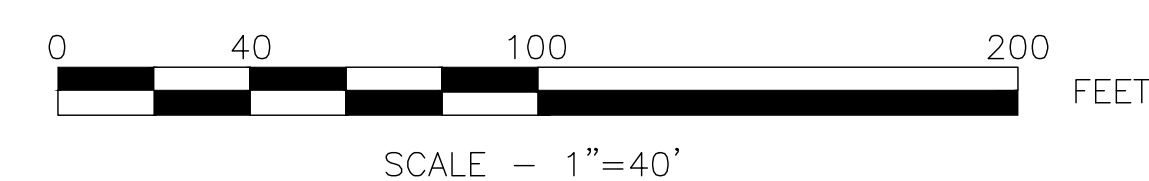


PHASE III:

1. STRIPE THE NORTHERN SIDE OF NEW BRIDGE WITH TEMP. 11' LANES, USE REMOVABLE TAPE. REMOVE EXISTING SIGNALS AND ACTIVATE NEW SIGNALS. REMOVE SIGNS AND STRIPING THAT CONFLICT WITH PROPOSED TRAFFIC PATTERN. SHIFT TRAFFIC TO THE NORTHERN SIDE OF NEW BRIDGE.
2. SHIFT PEDESTRIANS TO NORTHERN SIDEWALK ALONG NEW BRIDGE.
3. DEMOLISH TEMPORARY BRIDGE AND ROADWAY. POND RE-OPENS TO ALL BOAT TRAFFIC.
4. COMPLETE CONSTRUCTION OF SOUTHERN SIDE OF ROADWAY INCLUDING EMBANKMENTS, WALKWAYS, RETAINING WALLS, SIDEWALK, AND REMAINDER OF FENDER SYSTEM.

PHASE IV:

1. STRIPE NEW ROADWAY AND BRIDGE. SEE PAVEMENT MARKING AND SIGNAGE PLAN.
2. COMPLETE CONSTRUCTION OF NORTHERN SIDEWALK WITH TEMPORARY SHOULDER CLOSURE.

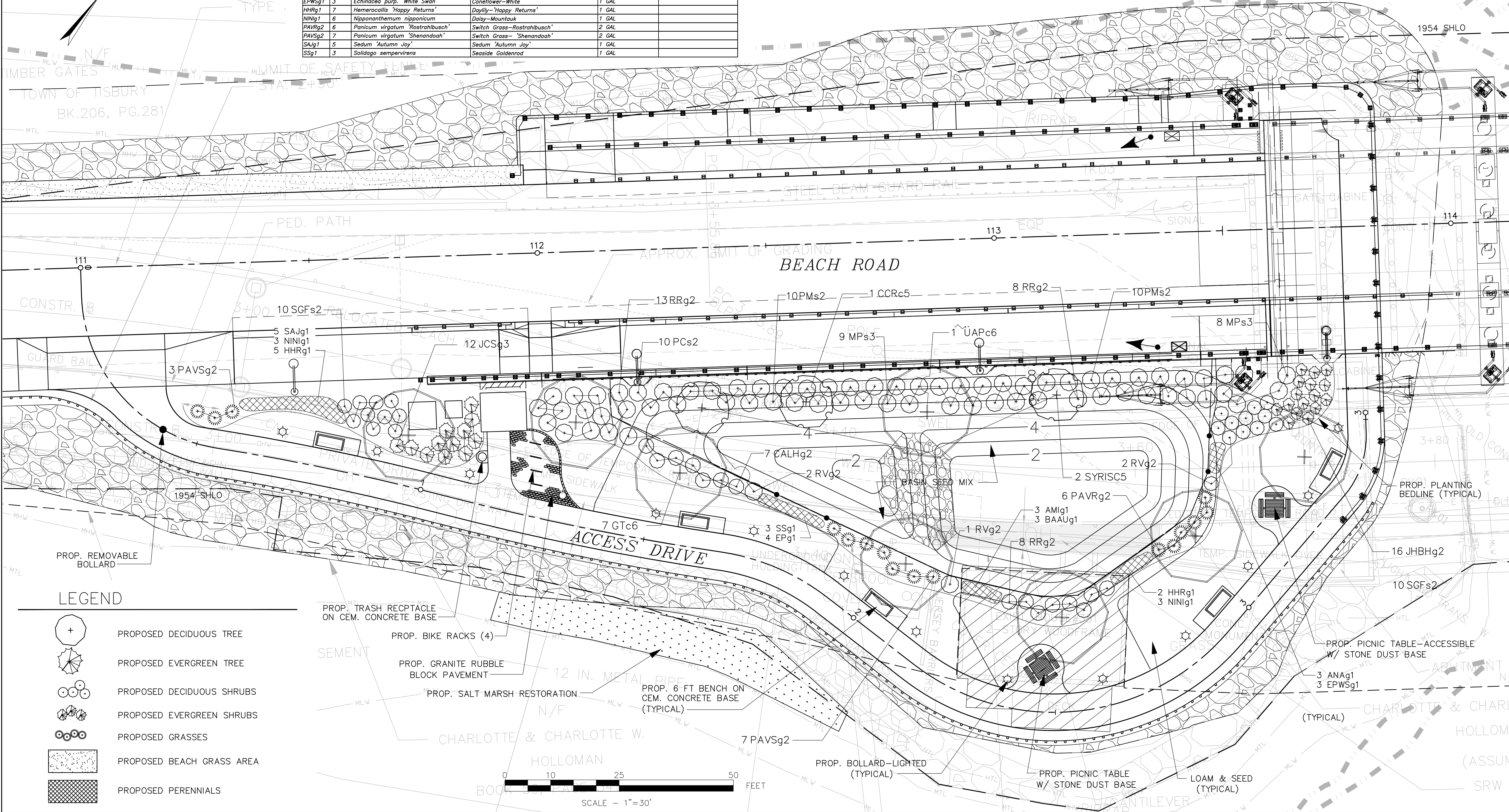


PLANT LIST- TISBURY SIDE					
SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
TREES					
CCRc5	1	Crataegus crusgali	Hawthorn-Cockspur	2-2.5 IN CAL	
GTc6	7	Gleditsia triacanthos inermis	Honeylocust-Thornless	2.5-3 IN CAL	
SYRISC5	2	Syringa reticulata 'Ivory Silk'	Jap. Tree Lilac 'Ivory Silk'	2-2.5 IN CAL	
UAPc6	1	Ulmus americana 'Princeton'	Elm-American 'Princeton'	2.5-3 IN CAL	
SHRUBS					
CALHg2	7	Clethra alnifolia 'Hummingbird'	Summersweet-'Hummingbird'	3 GAL	
JHBHg2	16	Juniperus horiz. 'Bar Harbor'	Juniper-'Bar Harbor'	2 GAL	
JCSGg3	12	Juniperus chin. sargentii 'Viridis'	Juniper 'Sargent's Green'	3 GAL	
MPs3	17	Myrica pensylvanica	Bayberry-Northern	3 GAL	
PCs2	10	Purple Leaf Sand Cherry	Prunus cistena	2 GAL	
PMs2	20	Beach Plum	Prunus maritima	2 GAL	
RRg2	29	Rose-Rugosa	Rosa rugosa	2 GAL	
RVg2	4	Rose-Virginia	Rosa virginiana	2 GAL	
SGFs2	20	Spiraea 'Gold Flame'	Spiraea 'Gold Flame'	2 GAL	
PERENNIALS/GRASSES					
AMlg1	5	Achillea millefolium	Yarrow-Common	1 GAL	
ANAg1	3	Aster novae angliae	Aster-New England	1 GAL	
BAAUg1	3	Baptisia australis	False Blue Indigo	1 GAL	
EPg1	4	Echinacea purpurea	Coneflower-Purple	1 GAL	
EPWsg1	3	Echinacea purp. 'White Swan'	Coneflower-White	1 GAL	
HHRg1	7	Hemerocallis 'Happy Returns'	Daylily-'Happy Returns'	1 GAL	
NINlg1	6	Nipponanthemum nipponicum	Daisy-Mountauk	1 GAL	
PAVRg2	6	Panicum virgatum 'Rostraltbusch'	Switch Grass-Rostraltbusch'	2 GAL	
PAVSg2	7	Panicum virgatum 'Shenandoah'	Switch Grass-'Shenandoah'	2 GAL	
SAJg1	5	Sedum 'Autumn Joy'	Sedum 'Autumn Joy'	1 GAL	
SSg1	3	Solidago sempervirens	Seaside Goldenrod	1 GAL	

NOTES: PLANTS SHALL BE MOVED TO ACCOMMODATE PROPOSED
TRANSFORMER PAD FOUNDATIONS AND LIGHTING LOAD CENTERS.

OAK BLUFFS - TISBURY			
BEACH ROAD OVER LAGOON POND			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	40	254
PROJECT FILE NO.: 604029			

LANDSCAPE PLANS
TISBURY



SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
TREES					
AMAh4	3	<i>Amelanchier laevis</i>	Shad Tree-'Allegheny Clump'	10-12 FT	
JVh1	10	<i>Juniperus virginiana</i>	Cedar-Eastern Red	5-6 FT	
PRh1	16	<i>Pinus rigida</i>	Pine-Pitch	5-6 FT	
SHRUBS					
CPs1	13	<i>Comptonia peregrina</i>	Sweetfern	1 GAL	
JHBh2	25	<i>Juniperus horiz.</i> 'Bar Harbor'	Juniper-'Bar Harbor'	2 GAL	
JHCOg3	9	<i>Juniperus virg.</i> 'Gray Owl'	Juniper-'Gray Owl'	3 GAL	
MPs3	42	<i>Myrica pensylvanica</i>	Bayberry-Northern	3 GAL	
PCs2	13	Purple Leaf Sand Cherry	<i>Prunus cistena</i>	2 GAL	
PMs2	61	Beach Plum	<i>Prunus maritima</i>	2 GAL	
RALGs2	9	<i>Rhus aromatica</i> 'Gro-Low'	Sumac-Fragrant 'Gro-Low'	2 GAL	
RMSs2	10	Rose-Mediland Scarlet	Rosa 'Meikrotal'	2 GAL	
RRg2	32	Rose-Rugosa	Rosa rugosa	2 GAL	
SGFs2	7	<i>Spiraea</i> 'Gold Flame'	Spiraea 'Gold Flame'	2 GAL	
PERENNIALS/GRASSES					
AMlg1	21	<i>Achillea millefolium</i>	Yarrow-Common	1 GAL	
BAUg1	15	<i>Baptisia australis</i>	False Blue Indigo	1 GAL	
EBFg1	13	<i>Festuca cinerea</i> 'Elijah Blue'	Blue Fescue-'Elijah Blue'	1 GAL	
PAVRg2	9	<i>Panicum virgatum</i> 'Rostraltbusch'	Switch Grass-'Rostraltbusch'	2 GAL	
SSg1	21	<i>Solidago sempervirens</i>	Seaside Goldenrod	1 GAL	



(ASSUMED)_B

WOOD & WIRE FENCE
AT BOTTOM OF SLOPE

STEEL BEAM GUARD RA

PROP. SALT MARSH RESTORATION (TYP)

0 10 25 50 FEET

SCALE - 1"=10'

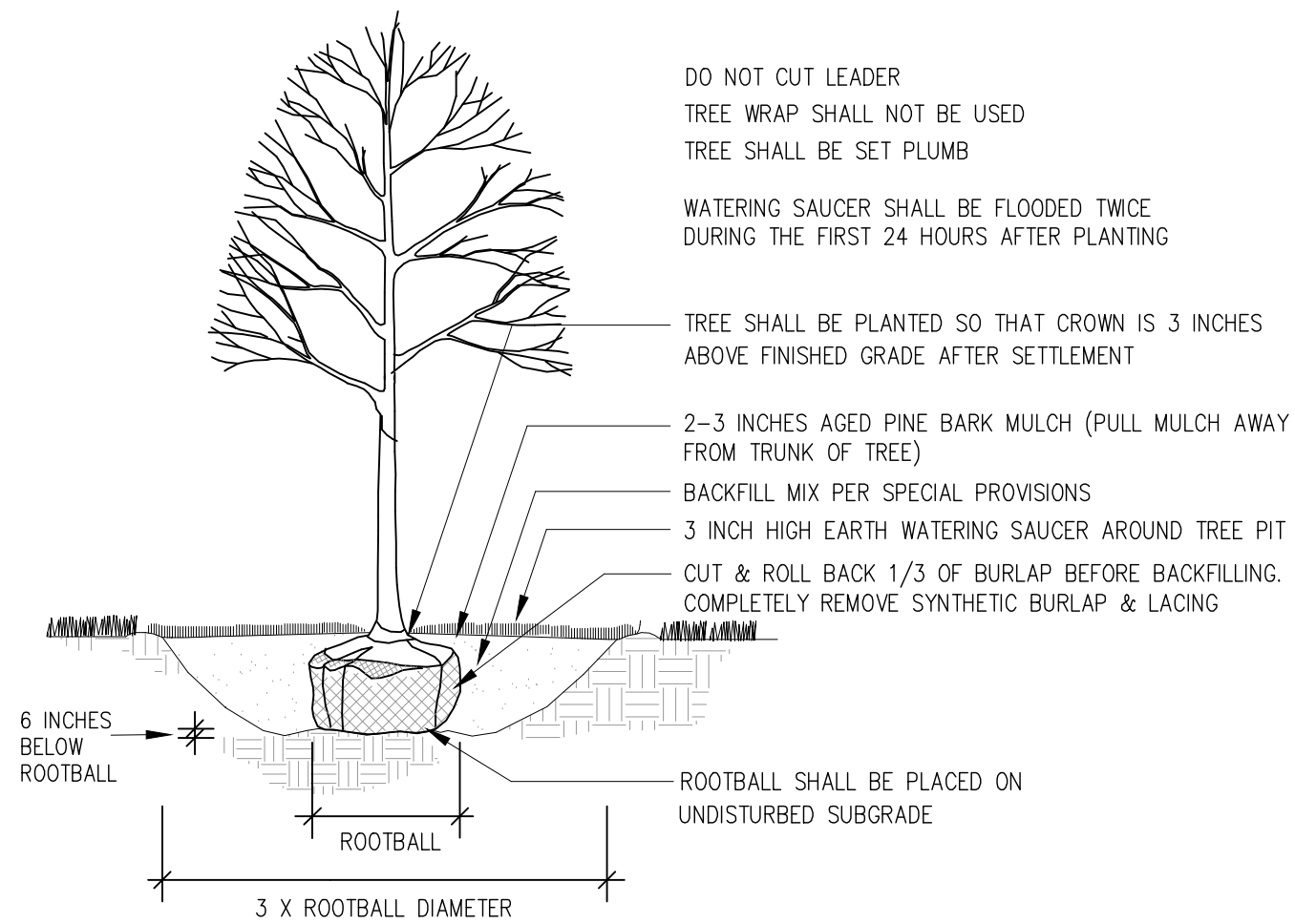


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OAK BLUFFS – TISBURY
BEACH ROAD OVER LAGOON POND

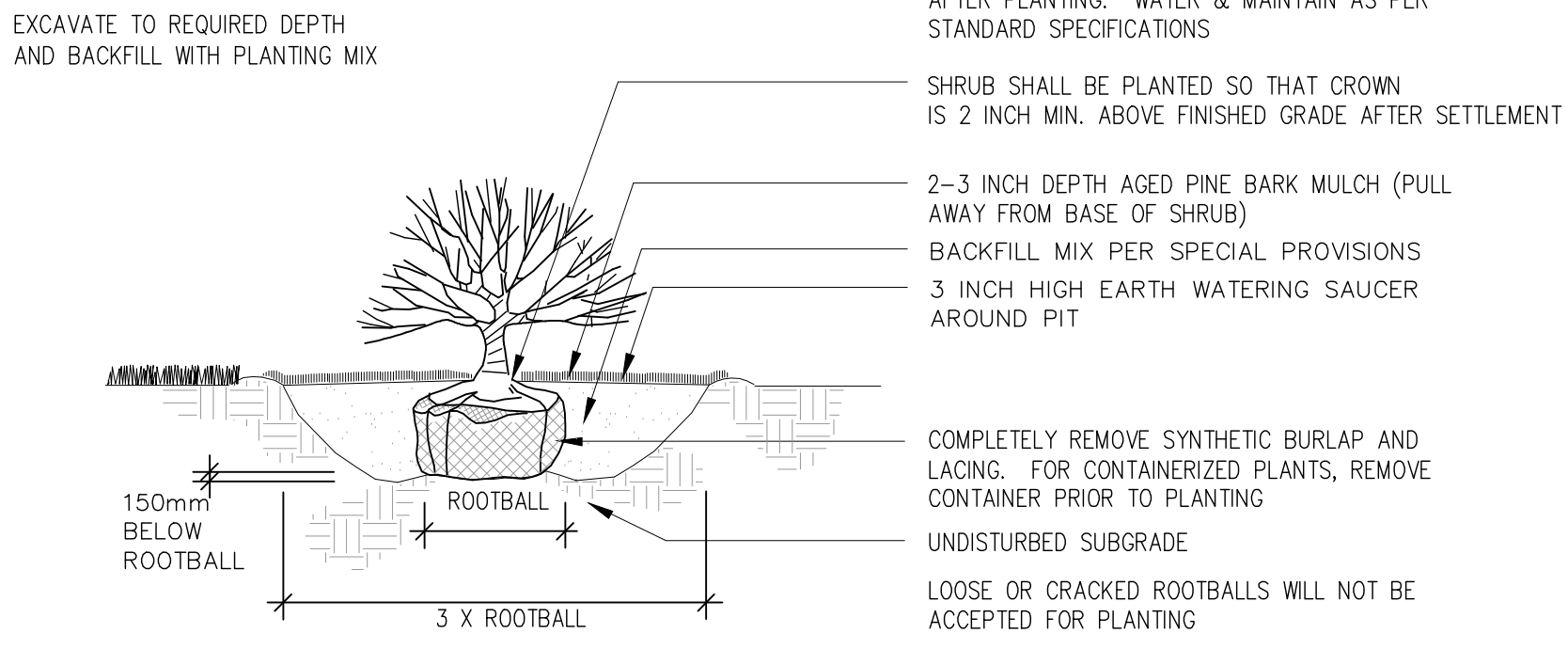
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MA	BR-002S(462)	42	254
PROJECT FILE NO.: 604029			

LANDSCAPE DETAILS



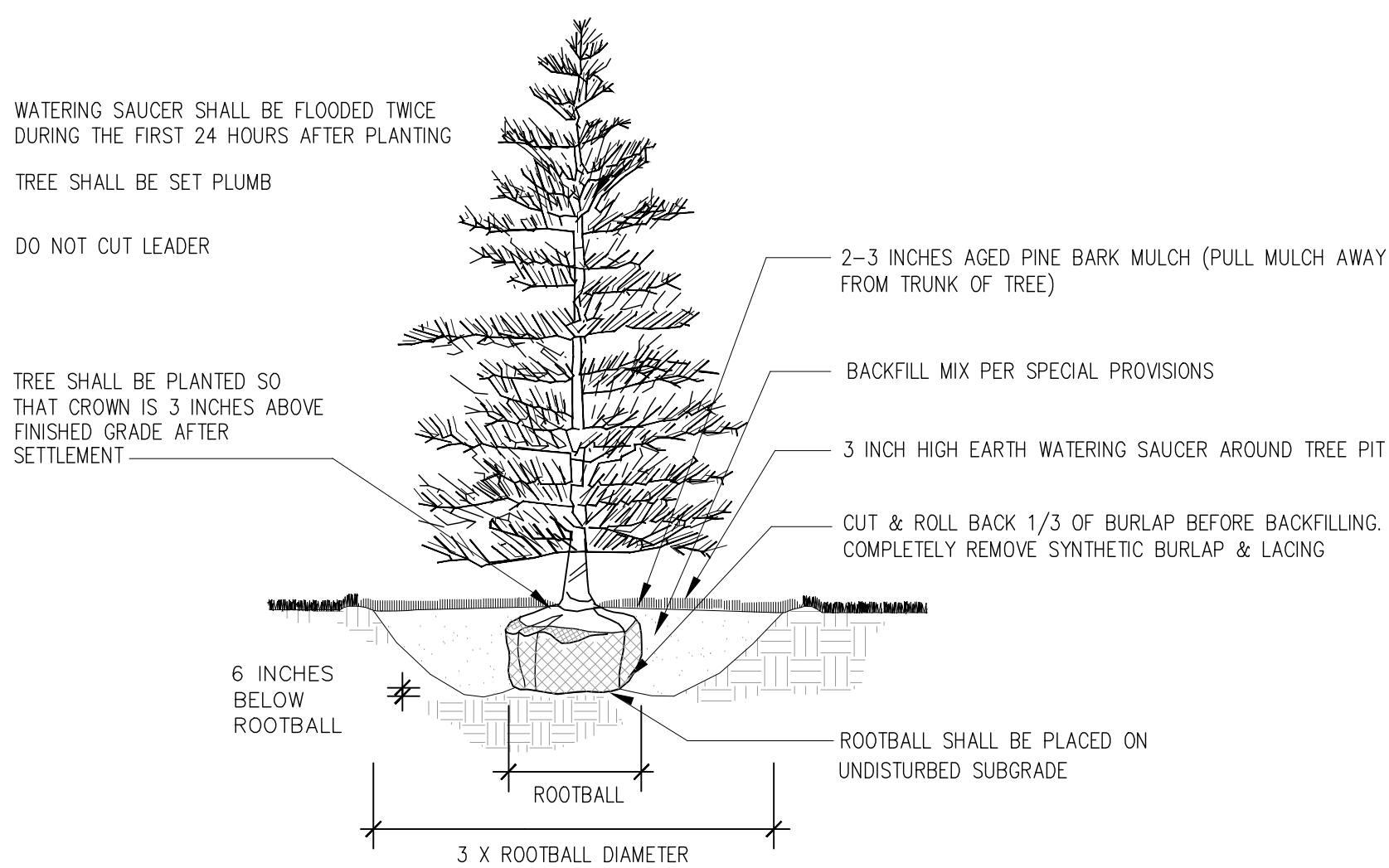
DECIDUOUS TREE PLANTING

NOT TO SCALE



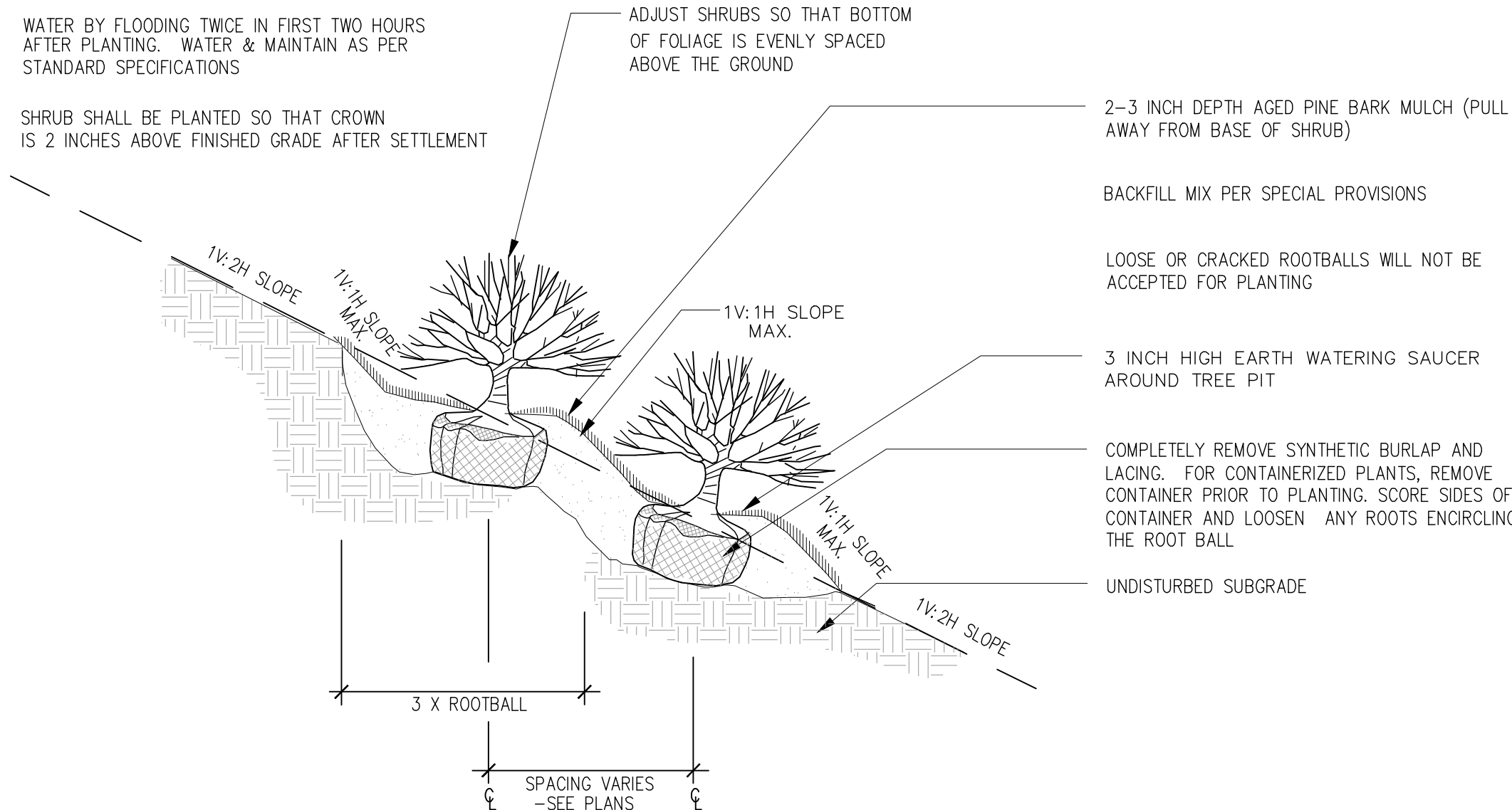
SHRUB PLANTING

NOT TO SCALE



EVERGREEN TREE PLANTING

NOT TO SCALE



SHRUB PLANTING (SLOPE)

NOT TO SCALE

PLANT LIST- SUMMARY

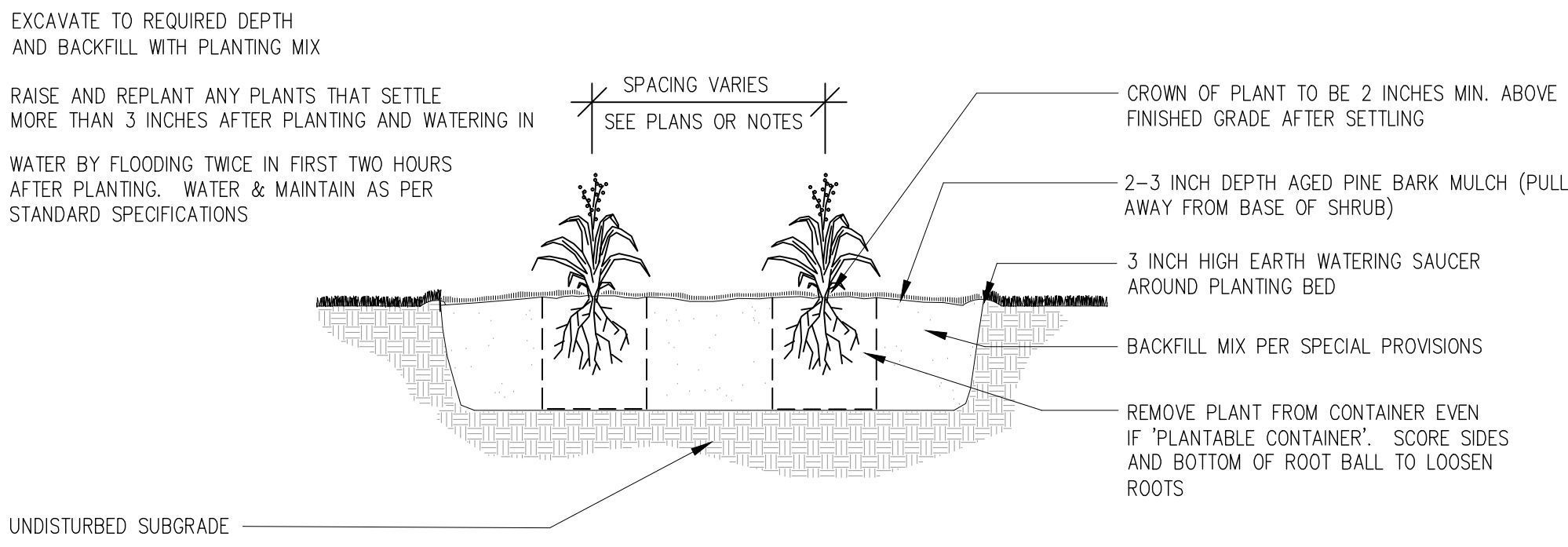
SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
TREES					
AMAh4	3	Amelanchier laevis	Shad Tree-'Allegheny Clump'	10-12 FT	
CCRc5	1	Crataegus crusgali	Hawthorn-Cockspur	2-2.5 IN CAL	
QTc6	7	Gleditsia triacanthos inermis	Honeylocust-Thornless	2.5-3 IN CAL	
JVh1	10	Juniperus virginiana	Cedar-Eastern Red	5-6 FT	
PRh1	16	Pinus rigida	Pine-Pitch	5-6 FT	
SYRISc5	2	Syringa reticulata 'Ivory Silk'	Jap. Tree Lilac 'Ivory Silk'	2-2.5 IN CAL	
UAPc6	1	Ulmus americana 'Princeton'	Elm-American 'Princeton'	2.5-3 IN CAL	

SHRUBS

CALHg2	7	Clethra alnifolia 'Hummingbird'	Summersweet-'Hummingbird'	3 GAL	
CPs1	13	Comptonia peregrina	Sweetfern	1 GAL	
JCSGg3	12	Juniperus chin. sargentii 'Viridis'	Juniper 'Sargent's Green'	3 GAL	
JHBHg2	41	Juniperus horiz. 'Bar Harbor'	Juniper-'Bar Harbor'	2 GAL	
JHG0g3	9	Juniperus virg. 'Gray Owl'	Juniper-'Gray Owl'	3 GAL	
MPs3	59	Myrica pensylvanica	Bayberry-Northern	3 GAL	
PCs2	23	Purple Leaf Sand Cherry	Prunus cistena	2 GAL	
PMs2	61	Beach Plum	Prunus maritima	2 GAL	
RALGs2	9	Rhus aromatica 'Gro-Low'	Sumac-Fragrant 'Gro-Low'	2 GAL	
RMSs2	10	Rose-Mediland Scarlet	Rosa 'Meikrotal'	2 GAL	
RRg2	61	Rose-Rugosa	Rosa rugosa	2 GAL	
RVg2	4	Rose-Virginia	Rosa virginiana	2 GAL	
SGFs2	27	Spirea 'Gold Flame'	Spirea 'Gold Flame'	2 GAL	

PERENNIALS/GRASSES

AMig1	24	Achillea millefolium	Yarrow-Common	1 GAL	
ANAg1	3	Aster novae angliae	Aster-New England	1 GAL	
BAAUg1	18	Baptisia australis	False Blue Indigo	1 GAL	
EBFg1	13	Festuca cinerea 'Elijah Blue'	Blue Fescue-'Elijah Blue'	1 GAL	
EPg1	4	Echinacea purpurea	Coneflower-Purple	1 GAL	
EPWSg1	3	Echinacea purp. 'White Swan'	Coneflower-White	1 GAL	
HHRg1	7	Heemerocallis 'Happy Returns'	Daylily-'Happy Returns'	1 GAL	
NINig1	6	Nipponanthemum nipponicum	Daisy-Mountauk	1 GAL	
PAVRg2	15	Panicum virgatum 'Rostrahlbusch'	Switch Grass-Rostrahlbusch'	2 GAL	
PAVSg2	7	Panicum virgatum 'Shenandoah'	Switch Grass-'Shenandoah'	2 GAL	
SAJg1	5	Sedum 'Autumn Joy'	Sedum 'Autumn Joy'	1 GAL	
SSg1	24	Solidago sempervirens	Seaside Goldenrod	1 GAL	



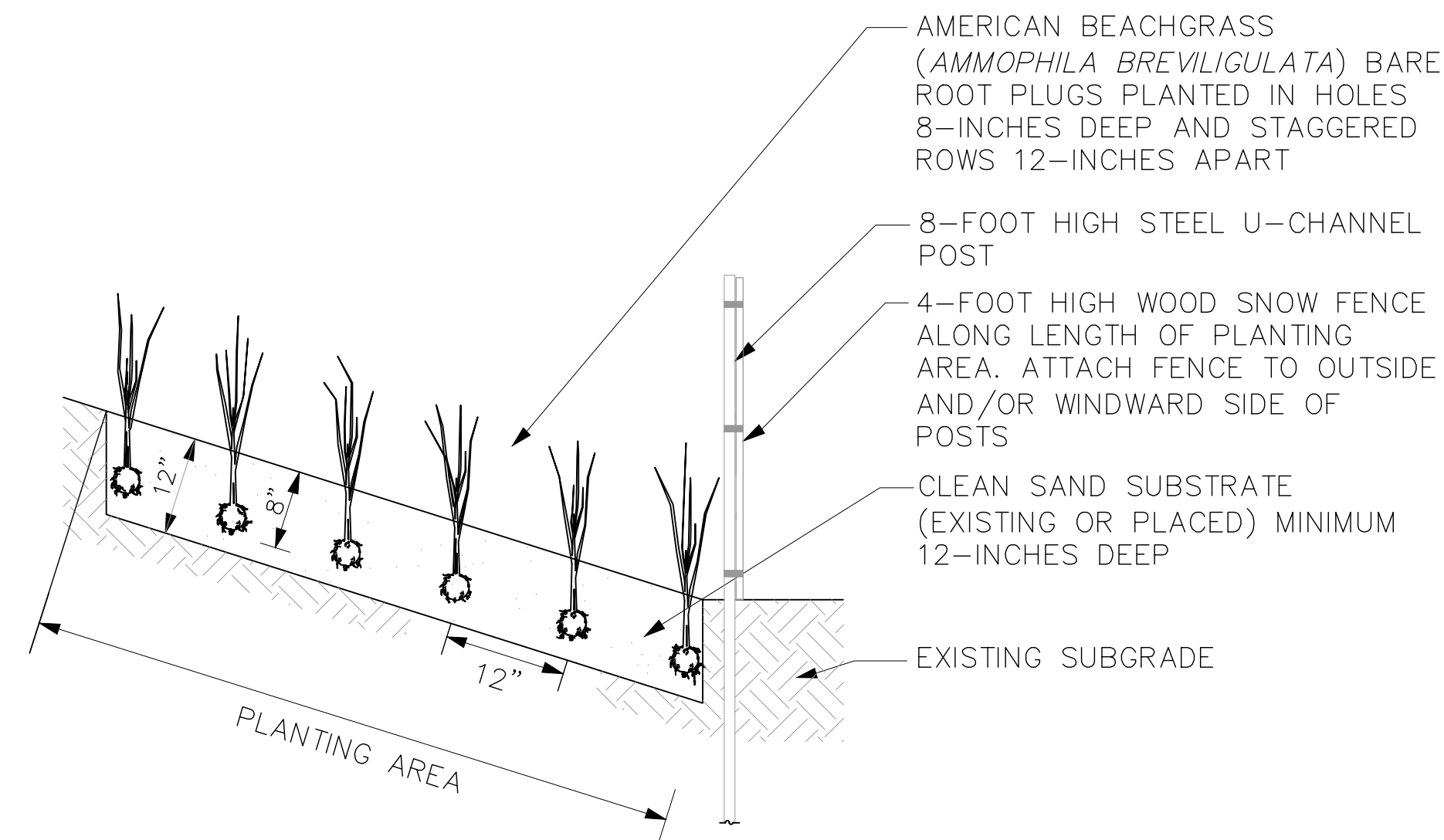
PERENNIAL PLANTING

NOT TO SCALE

OAK BLUFFS — TISBURY
BEACH ROAD OVER LAGOON POND

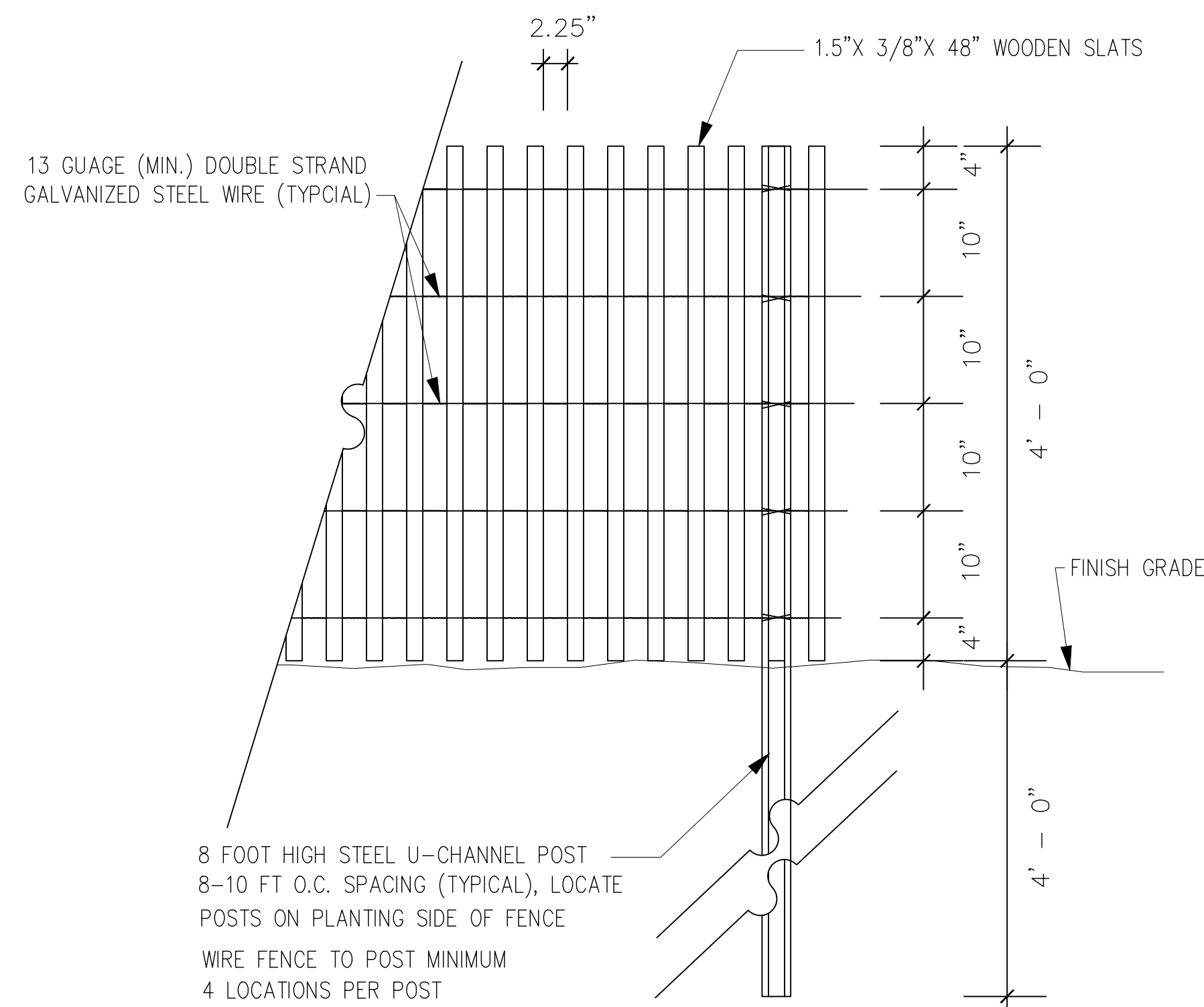
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	43	254
PROJECT FILE NO.: 604029			

LANDSCAPE DETAILS



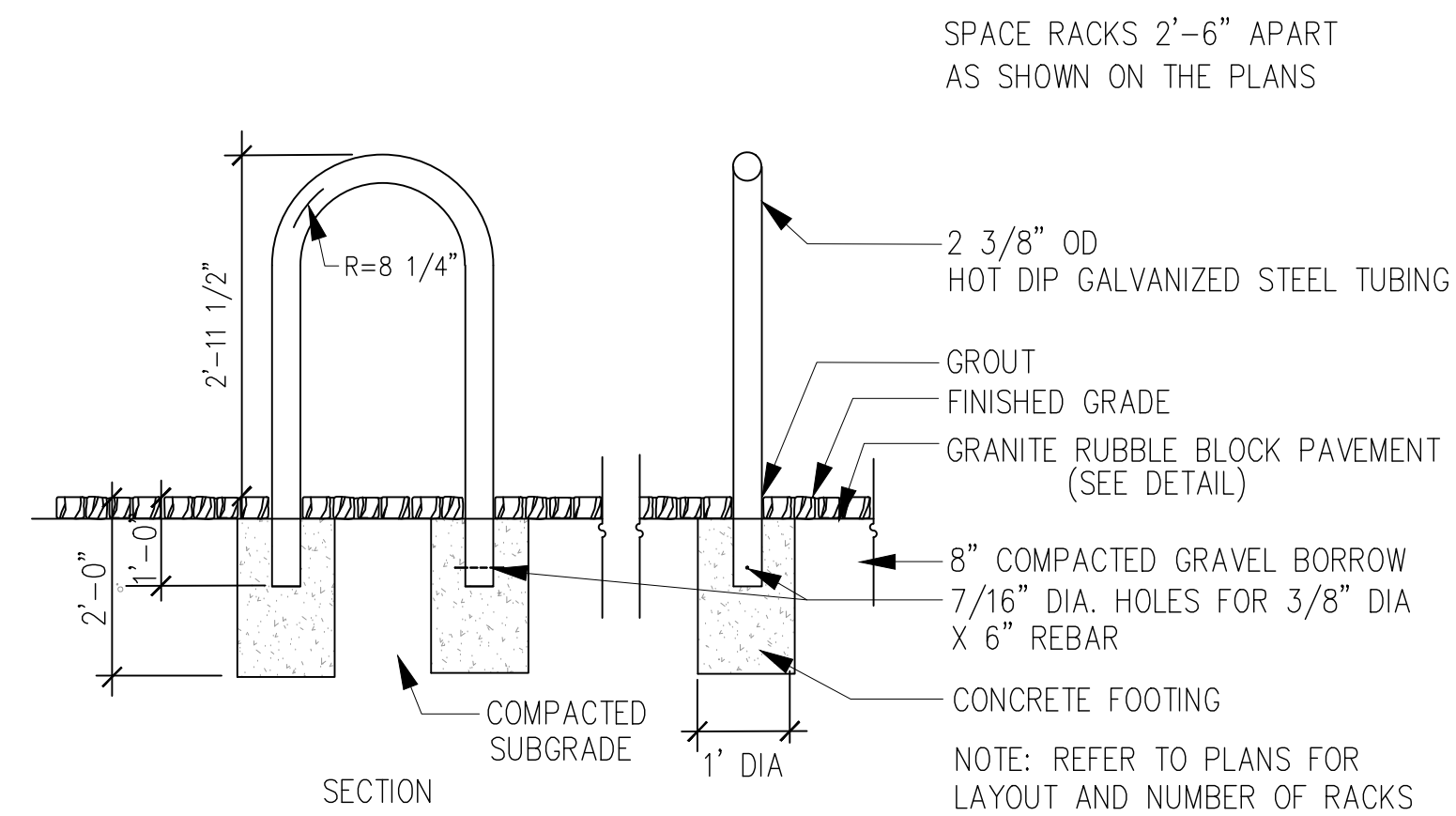
BEACHGRASS PLANTING DETAIL
NOT TO SCALE

20120619_MossDOT



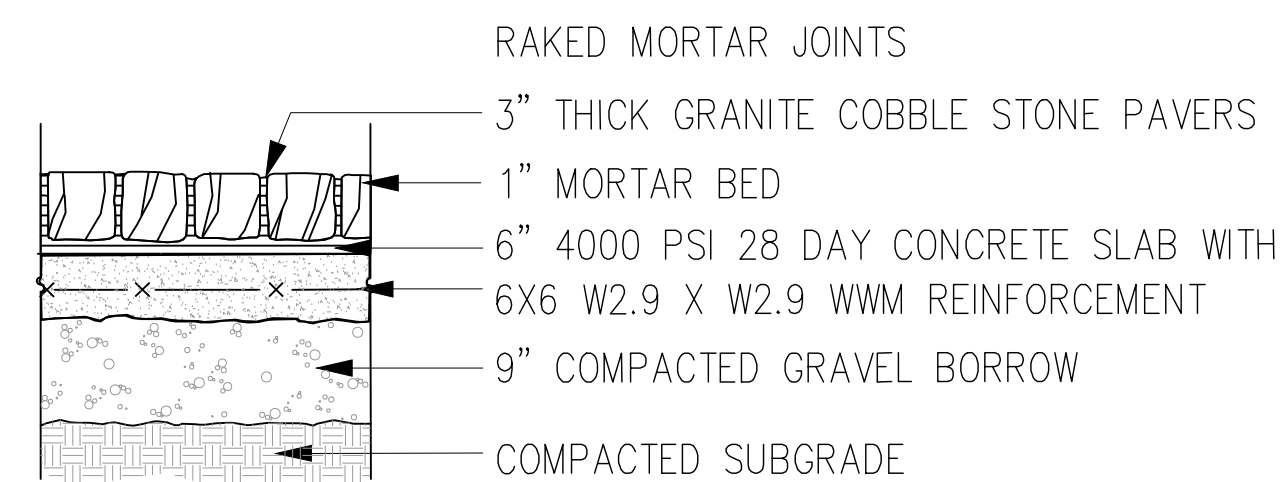
SNOW FENCE—WOOD & WIRE
NOT TO SCALE

20120517_MossDOT



BIKE RACK
NOT TO SCALE

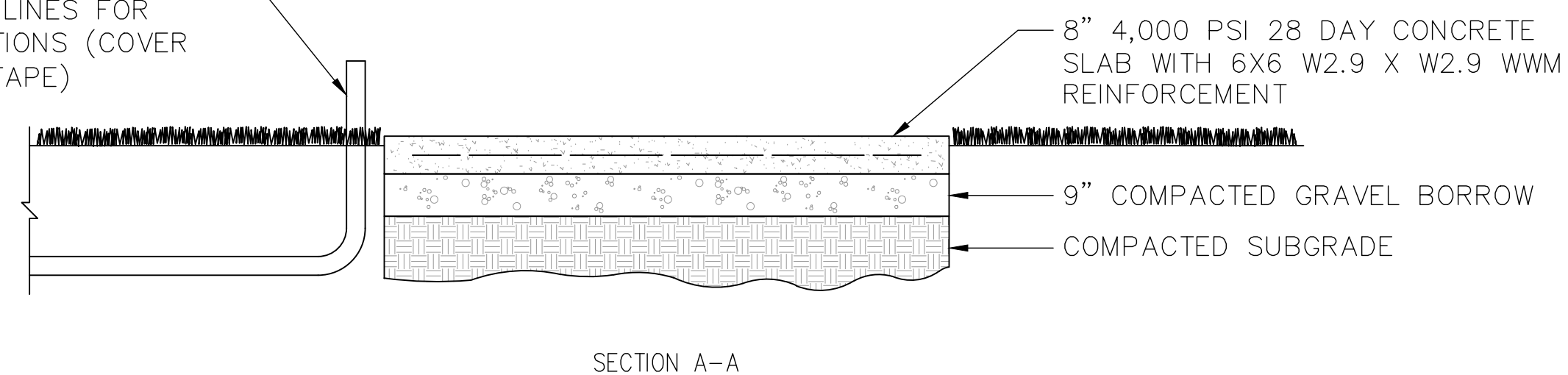
20120517_MossDOT



GRANITE RUBBLE BLOCK PAVEMENT
NOT TO SCALE

20120517_MossDOT

STUB ELECTRIC, SEWER, WATER, AND TELEPHONE LINES FOR FUTURE CONNECTIONS (COVER OPENINGS WITH TAPE)

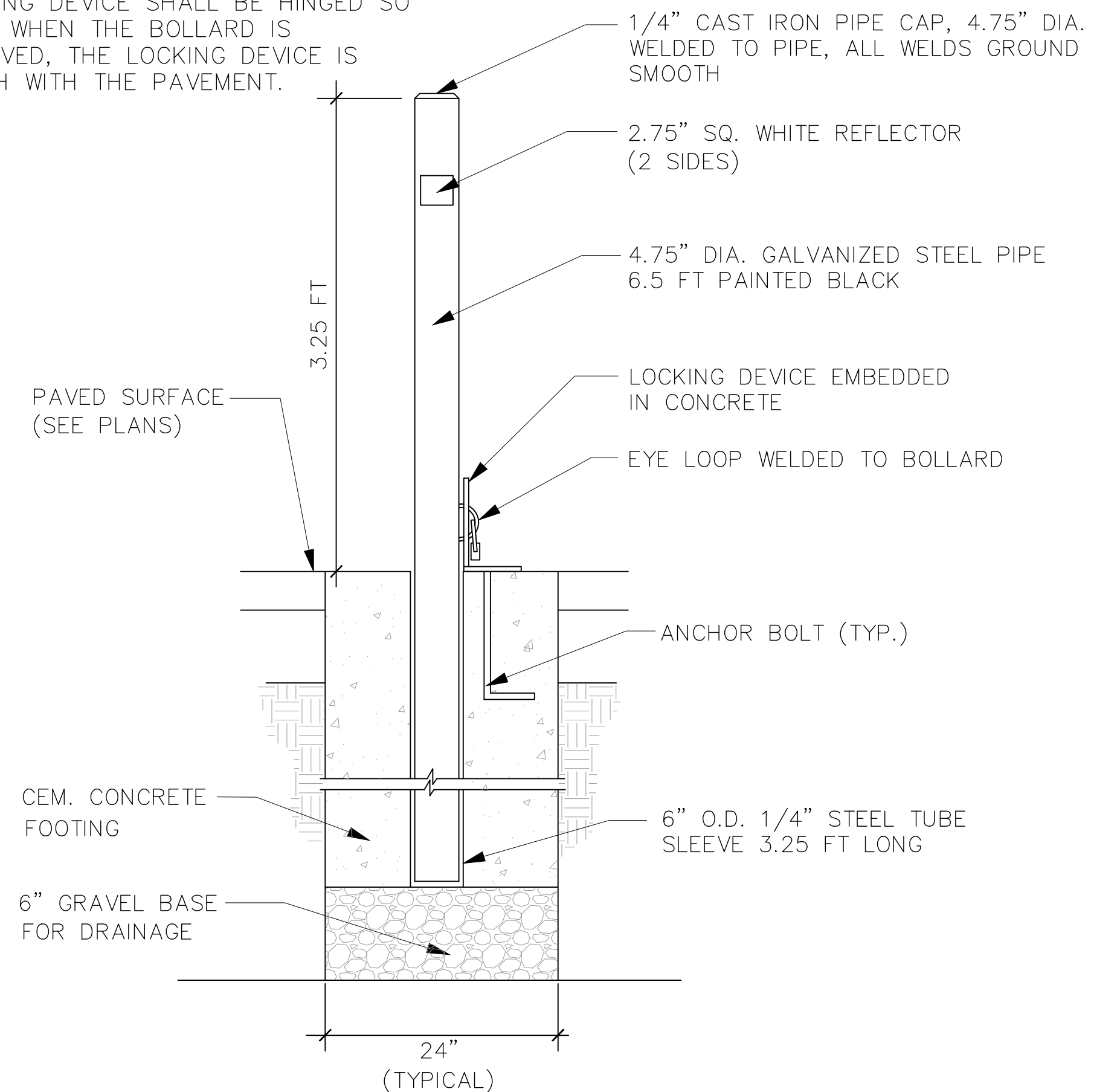


CONCRETE PAD DETAIL FOR FUTURE RESTROOM
NOT TO SCALE

20120530_MossDOT

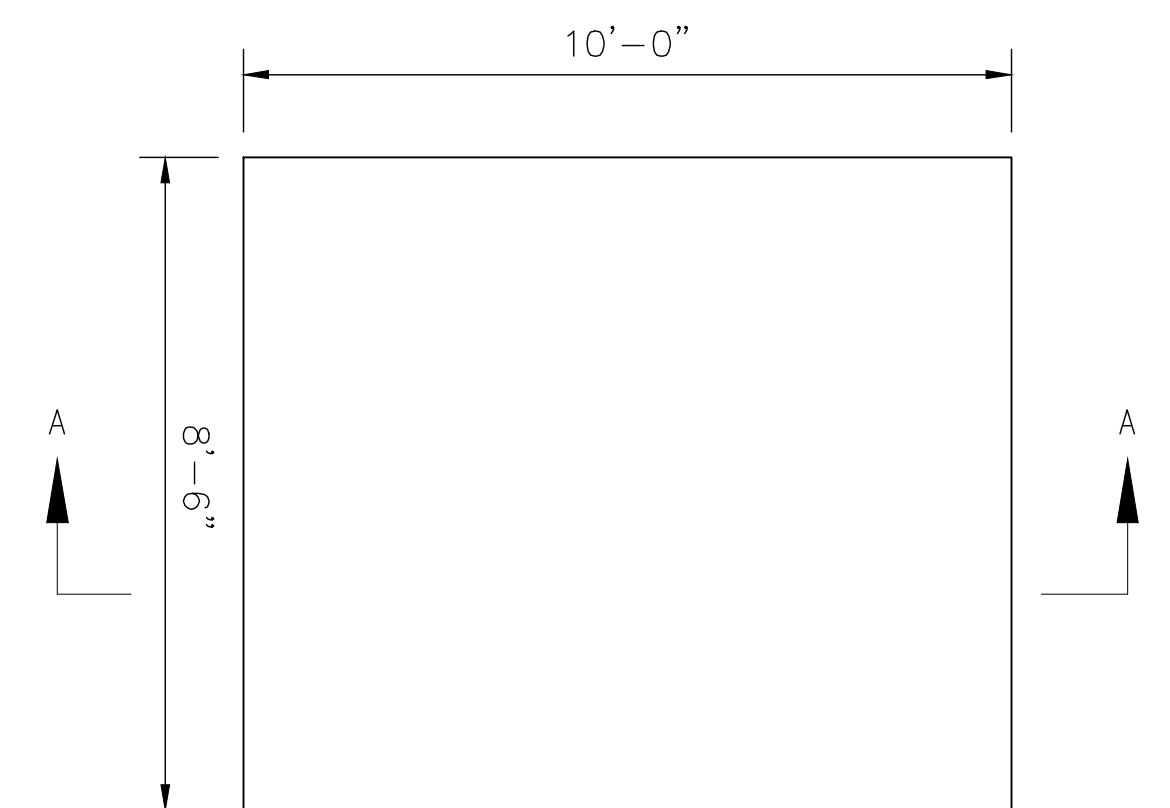
NOTES:

LOCKING DEVICE SHALL BE HINGED SO THAT WHEN THE BOLLARD IS REMOVED, THE LOCKING DEVICE IS FLUSH WITH THE PAVEMENT.



BOLLARD—STEEL—REMOVABLE
NOT TO SCALE

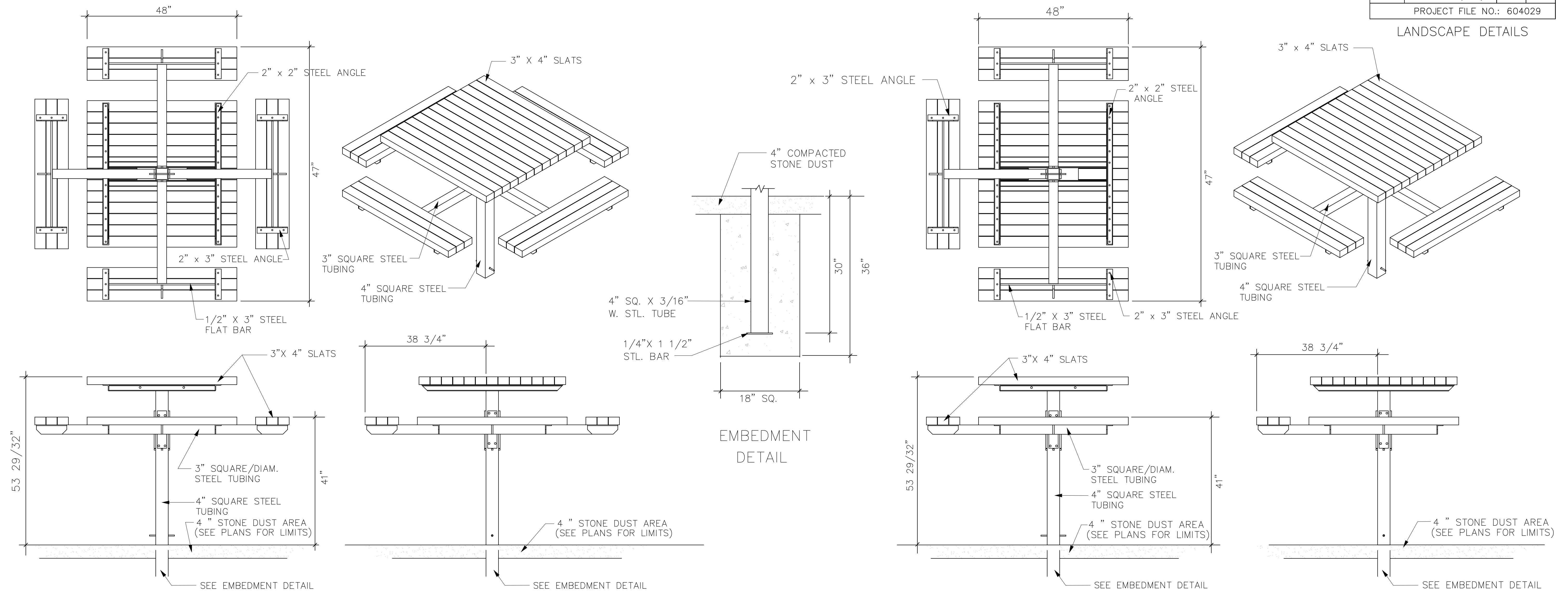
20120530_MossDOT



OAK BLUFFS — TISBURY
BEACH ROAD OVER LAGOON POND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	44	254
PROJECT FILE NO.: 604029			

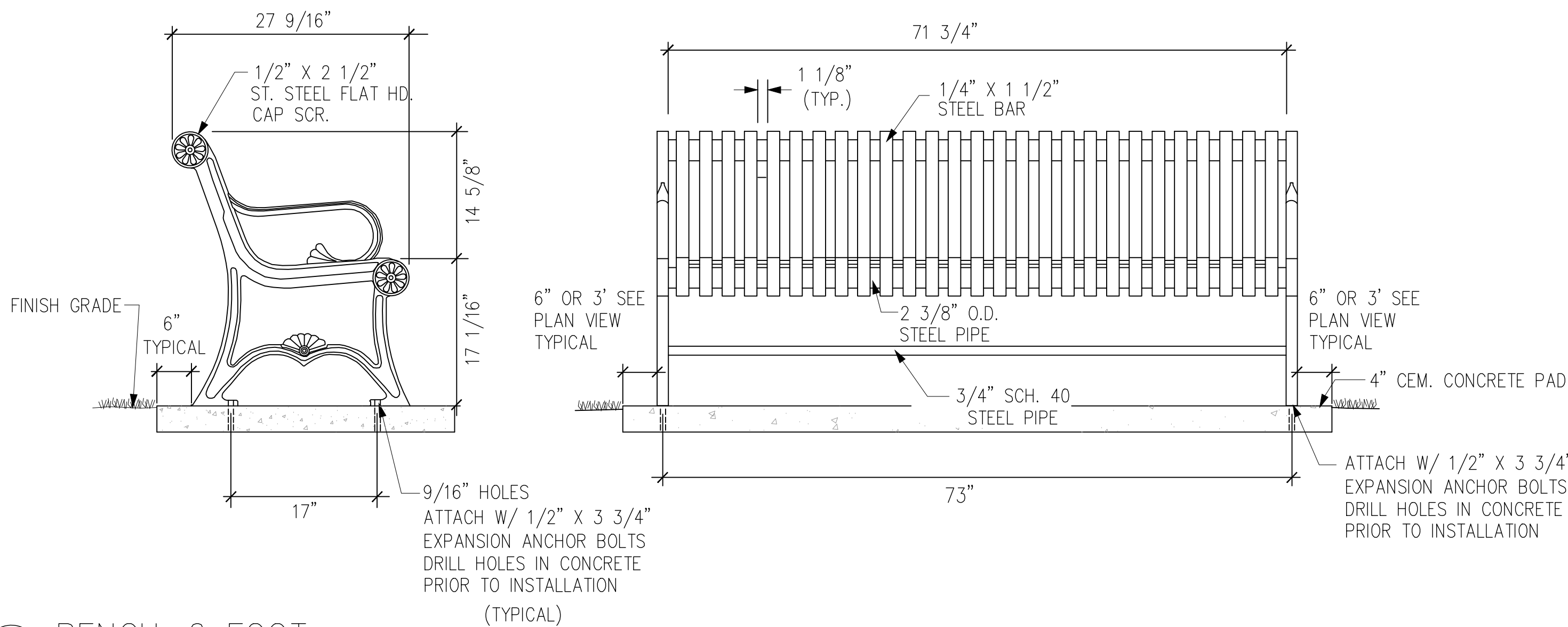
LANDSCAPE DETAILS



PICNIC TABLE—PEDESTAL— 4 FOOT & 4 FOOT ACCESSIBLE

NOT TO SCALE

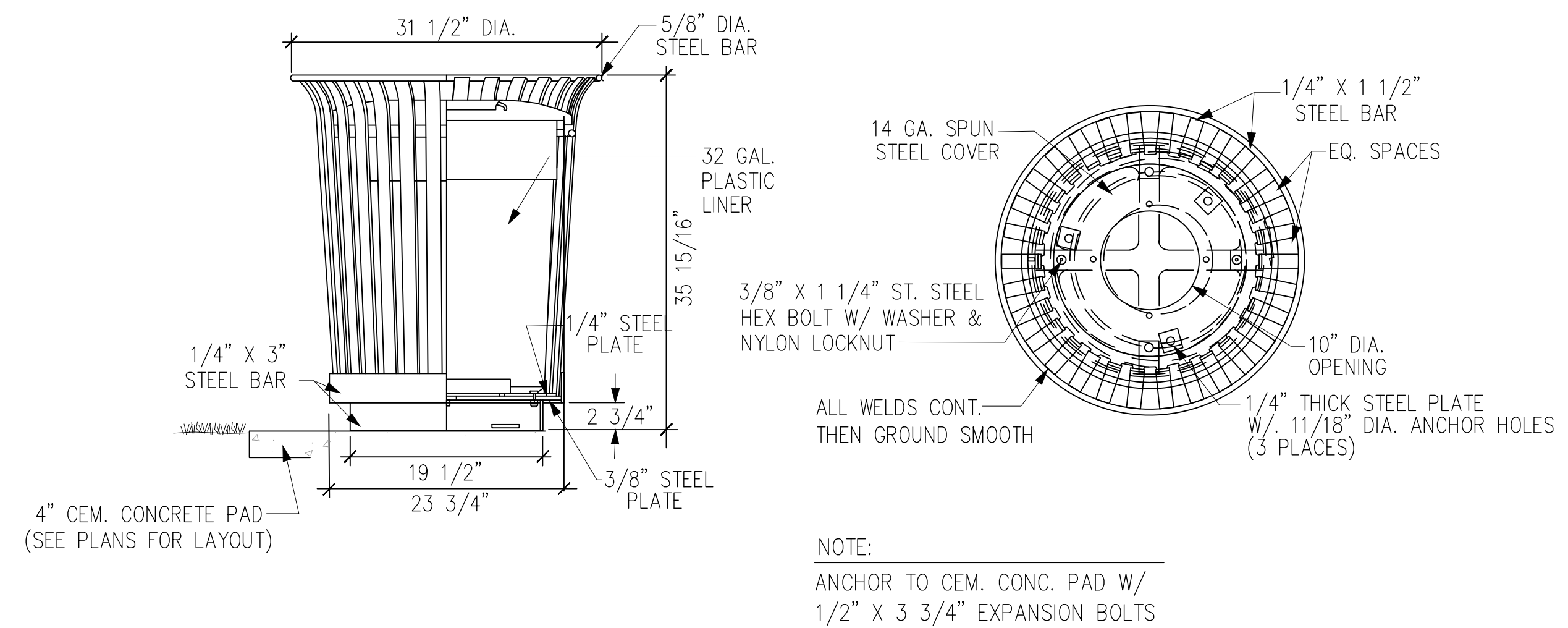
20120619_MossDOT



BENCH—6 FOOT

NOT TO SCALE

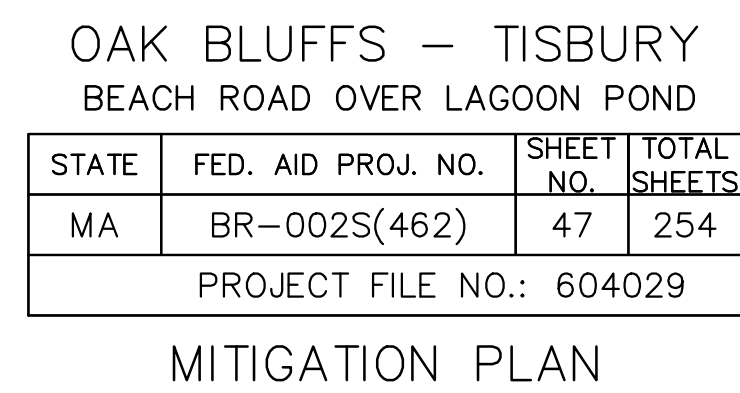
20120619_MossDOT



TRASH RECEPTACLE

NOT TO SCALE

20120619_MossDOT



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	BR-002S(462)	49	254
PROJECT FILE NO.: 604029			

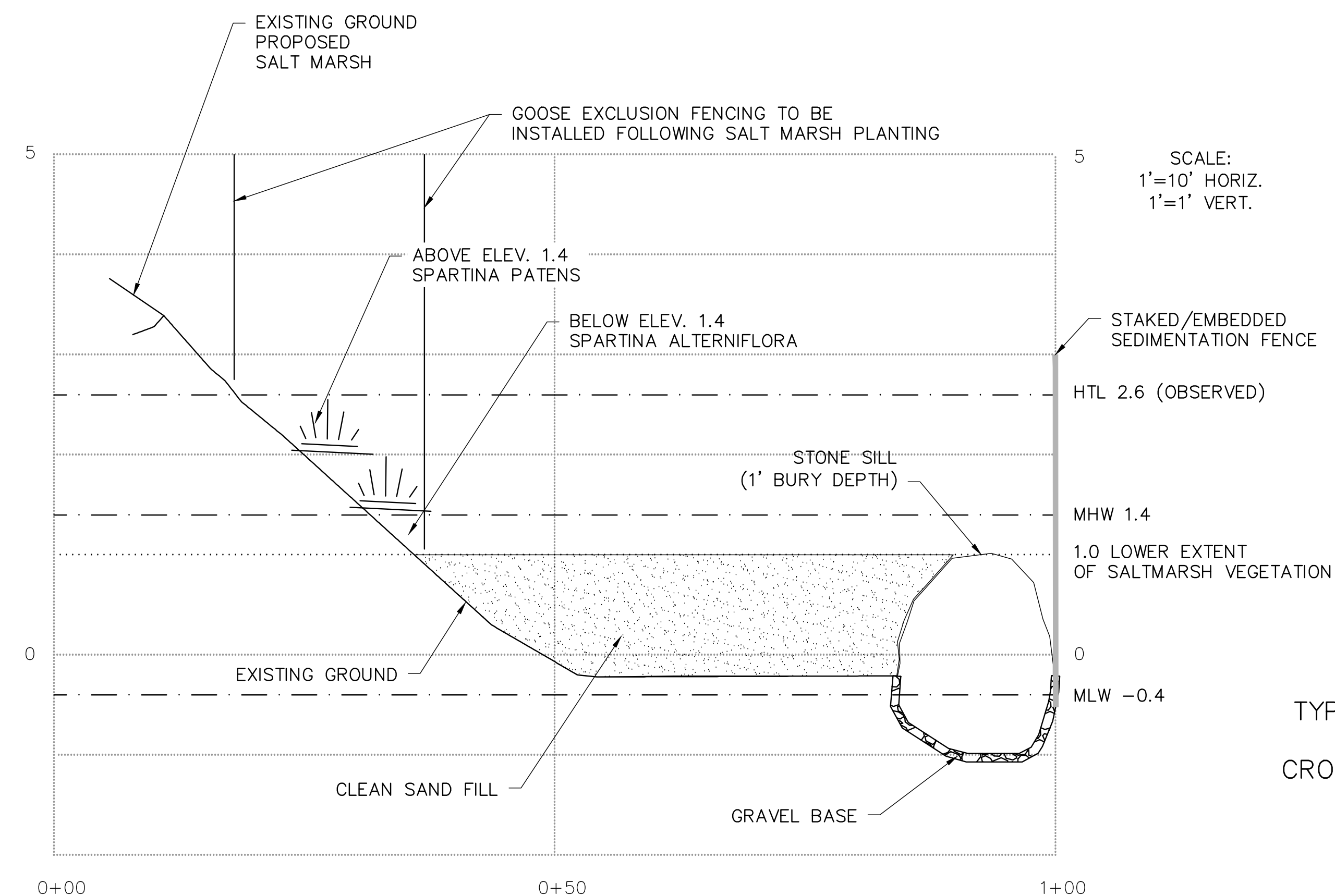
NOTES:

- | SYMBOL | TIDE LINES | ELEVATION (FT.) | INTER-TIDAL ZONE | ELEVATION RANGE (FT.) |
|--------|---|-----------------|------------------------|-----------------------|
| HTL | HIGH TIDE LINE
(APPROXIMATELY EQUAL TO THE MEAN HIGH WATER AND SPRING TIDE LINE) | 2.6 | TRANSITIONAL UPLAND | 2.6 TO 2.9 |
| MHW | MEAN HIGH WATER | 1.4 | HIGH MARSH
(OR BVW) | 1.4 TO 2.6 |
| MTL | MID-TIDE LINE | 0.5 | LOW MARSH | 0.5 TO 1.4 |
| MLW | MEAN LOW WATER | -0.4 | MUD/SAND FLAT | -.04 TO 0.5 |

- WETLAND REPLICATION PLANT LIST*

INTER-TIDAL ZONE	ELEVATION RANGE (FT.)	TOTAL AREA (SF)	PLANT SPECIES			
			QTY. (EA)	BOTANICAL NAME (COMMON NAME)	SIZE	PLANT SPACING (INCHES)
HIGH MARSH (OR BVW)	1.4–2.6	~1800	880	SPARTINA PATENS	2" PLUGS	18" ON CENTER
LOW MARSH	1.0–1.4	~1100	540	SPARTINA ALTERNIFLORA	2" PLUGS	18" ON CENTER

TYPICAL PROPOSED
SALT MARSH
CROSS SECTION B-B



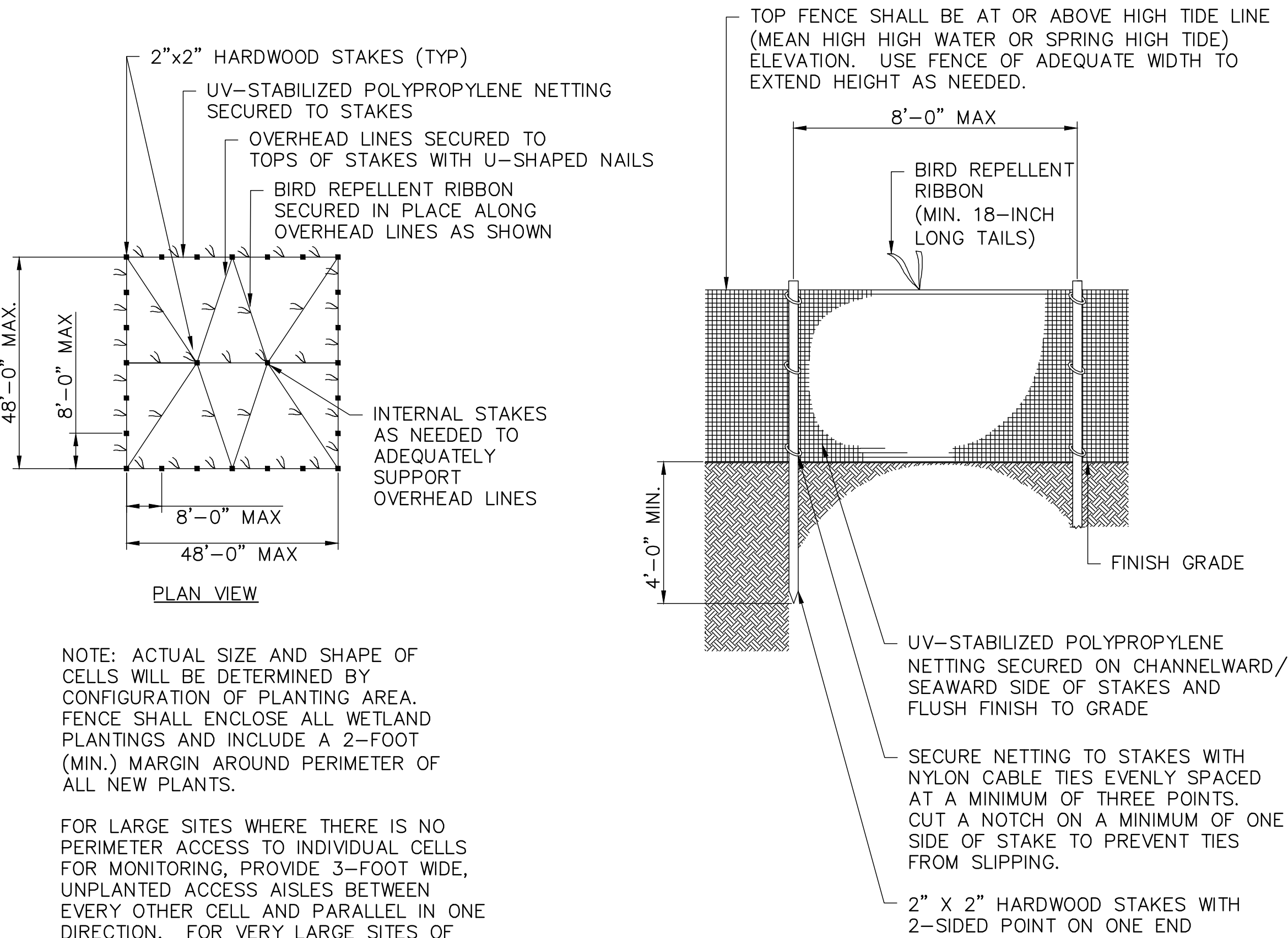
- GENERAL NOTES:
- THE MITIGATION AREA IS LOCATED OFF THE NORTHWEST QUADRANT OF THE PROJECT AREA, IN THE TISBURY, MA PORTION OF VINEYARD HAVEN HARBOR; APPROXIMATE STATION 101+50. THE AREA CONSISTS OF A LOW, BOULDER BREAKWATER/JETTY.
 - SALINITY: APPROXIMATELY 31 PPT (MEASURED YEARLY MEAN)(MASSACHUSETTS ESTUARIES PROJECT 2010. MASSDEP & UMASS DARTMOUTH)
 - REFERENCE: DONOR Z. MARINA BEDS LOCATED TO THE NORTHWEST OF THE BEACH ROAD DRAWBRIDGE IN VINEYARD HAVEN HARBOR AND BEDS LOCATED ADJACENT AND TO THE EAST OF THE PROPOSED REPLICATION AREA.
 - BENCHMARK: TISOAK 1936 DISK POINT ID #1919 ELEV. 18.18 VERTICAL DATUM BASED ON HALF TIDE NGVD (1929).
 - TABLE 1.: EXISTING INTER-TIDAL ZONE ELEVATIONS

SYMBOL	TIDE LINES	ELEVATION (FT.)	INTER-TIDAL ZONE	ELEVATION RANGE (FT.)
HTL	HIGH TIDE LINE (APPROXIMATELY EQUAL TO THE MEAN HIGH WATER AND SPRING TIDE LINE)	2.6	TRANSITIONAL UPLAND	2.6 TO 2.9
MHW	MEAN HIGH WATER	1.4	HIGH MARSH (OR BVW)	1.4 TO 2.6
MTL	MID-TIDE LINE	0.5	LOW MARSH	0.5 TO 1.4
MLW	MEAN LOW WATER	-0.4	MUD/SAND FLAT	-.04 TO 0.5

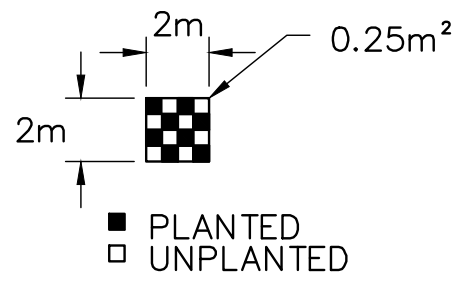
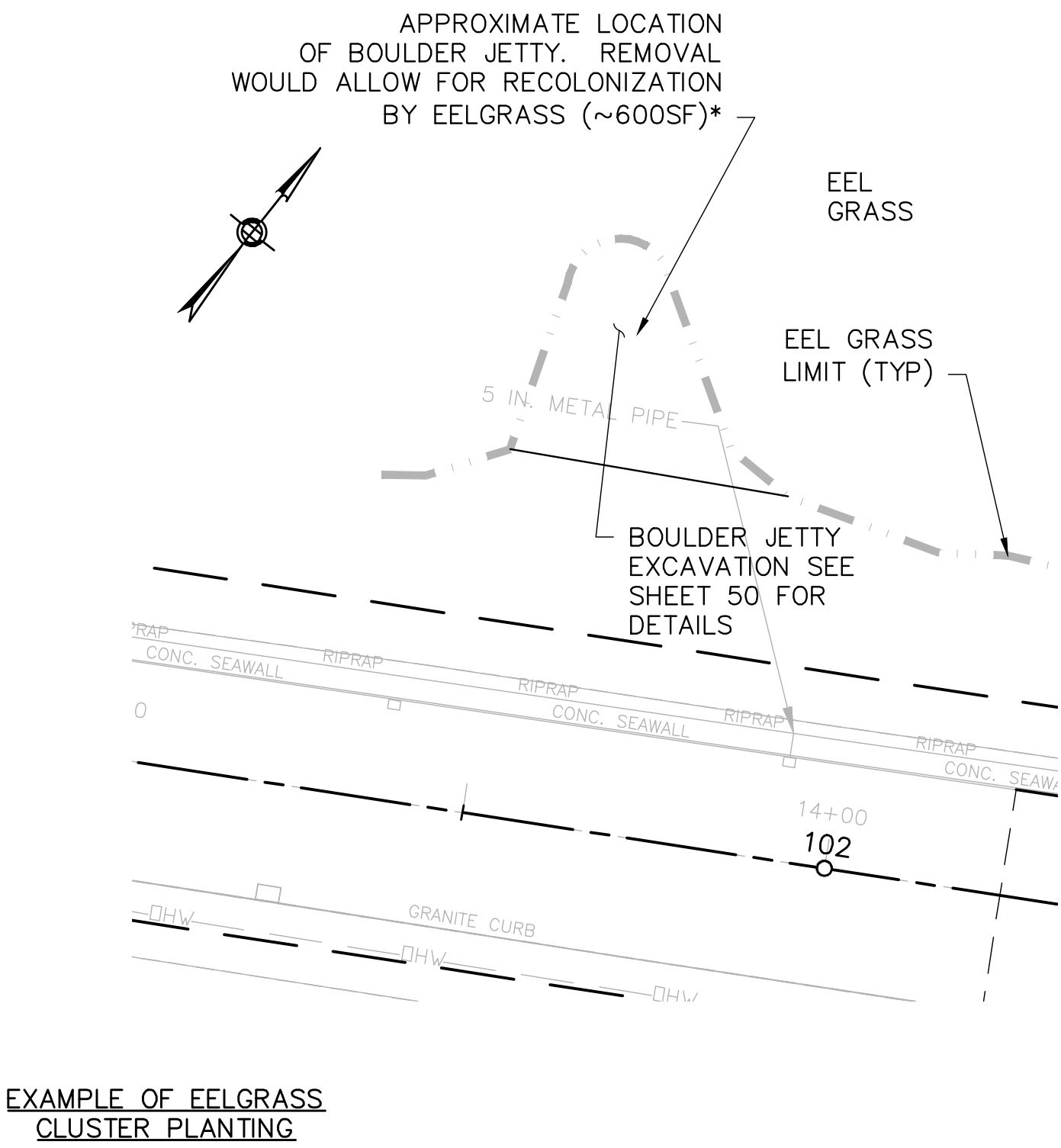
- WADERS OR SNORKELERS WOULD HAND PICK INDIVIDUAL Z. MARINA SHOOTS FROM THE IMPACT AREAS AND TRANSFER THE PLANT MATERIAL TO THE SHORE. WORKERS ON SHORE WILL ATTACH THE INDIVIDUAL SHOOTS TO BAMBOO SKEWERS. THE MITIGATION AREA WILL BE PLANTED EVENLY WITH THE AVAILABLE SHOOTS. IF ADEQUATE SHOOTS ARE SALVAGED, THEY CAN BE PLANTED IN THE CHECKERBOARD PATTERN AS INDICATED. TARGET ELEVATIONS FOR PLANTING ARE >0.9' AND < 4'. THE MITIGATION AREA SUBSTRATE SHOULD CONSIST OF MUDDY SAND (WITH LESS THAN 37% SILT/CLAY) AND WILL BE AT THE SAME GENERAL CONTOUR DEPTH AS THE ADJACENT BED.
- PLANTING WILL BE PERFORMED BY HAND. EROSION AND SEDIMENTATION CONTROLS ARE NOT PROPOSED. MINIMAL TO NO DISTURBANCE IS ANTICIPATED DURING HAND INSTALLATION OF THE Z. MARINA PLUGS.
- MARCH OR SEPTEMBER PLANTING WOULD BE PREFERRED BUT PLANTING IS ALSO ACCEPTABLE MARCH THROUGH JUNE. SHOOTS FROM THE IMPACT AREAS WILL BE SALVAGED AND TRANSPLANTED NO LATER THAN 72 HOURS AFTER BEING HARVESTED.

BOULDER JETTY EXCAVATION NOTES:

- REMOVE EXISTING BOULDERS IN THE IDENTIFIED AREA. AVOID DISTURBANCE TO ADJACENT VEGETATION AND PERFORM REMOVAL UNDER THE CONSULT OF THE WETLAND SPECIALIST. BOULDERS LOCATED BELOW GRADE WILL BE REMOVED TO THE EXTENT WHERE AT LEAST 6 TO 12 INCHES OF ADEQUATE ROOTING SUBSTRATE IS PRESENT WHEN THE AREA IS BACKFILLED TO MEET ADJACENT GRADES.
- REMAINING BOULDERS WILL BE RESHAPED TO FORM A JETTY UPGRADIENT OF THE EELGRASS BOUNDARY. SEVERAL FEET OF CLEARANCE WILL BE PROVIDED BETWEEN THE BOUNDARY AND JETTY IN AN EFFORT TO PREVENT SCOUR IN THE MITIGATION AREA. BOULDERS REMOVED FROM THE MITIGATION AREA WILL EITHER BE PLACED UPGRADIENT OF THE HTL AGAINST THE SEAWALL, REUSED FOR OTHER PORTIONS OF THE PROJECT IF SUITABLE, OR REMOVED FROM SITE.



GOOSE FENCE
NOT TO SCALE



NOTE: 50 SHOOTS PER 0.25m²
400 SHOOTS PER 2X2
IF ADEQUATE MATERIAL IS SALVAGED.

* MAY REQUIRE UP TO 600 SF (22 CY OF CLEAN SAND FILL TO BRING MITIGATION AREA UP TO GRADE WITH ADJACENT EELGRASS BEDS, AND THE WORK SHALL BE MONITORED BY THE ENVIRONMENTAL MONITOR.

AREA WILL BE TRANSPLANTED WITH ANY EELGRASS SHOOTS SALVAGED FROM THE IMPACTED AREAS.

EEL GRASS MITIGATION

