NORTH BAY HAVEN SYNTHETIC TURF
LYNN HAVEN, FLORIDA

FOR:

NORTH BAY HAVEN
1 BUCCANEER DRIVE
PANAMA CITY, FLORIDA 32404


N
PROJECT LOCATION
North Bay Haven Academy
Nature Walk Golf Course
Tolle Young Memorial Park
Mingo Branch
Water Lily Ct
Riverview Dr
Oak Forest Dr
Riverside Dr
Indian Springs Rd
Hoskins St
Grady St
Grubbs St
Barker St
Lewis Rd
Mingo Branch Rd
Lonely Way
Lowell Rd
Cotton Plant Rd
Nolly Rd
McCall Rd
Star Farm Rd
Cotton Plant Rd
Lynn Haven Bypass
Lynn Haven Parkway
Lynn Haven Creek
Hurst Creek
Hurst Creek Rd
Ryanair Ln
Ryanair Dr
Lowell Rd
Lakeview Ter
Granny Ln
Mingo Branch Rd
Lynn Haven Creek
Lynn Haven Parkway
Lynn Haven Bypass
Hurst Creek
Hurst Creek Rd
Cotton Plant Rd
Nolly Rd
Star Farm Rd
Lewis Rd
Barker St
Grubbs St
Hoskins St
Grady St
Indian Springs Rd
Riverside Dr
Oak Forest Dr
Riverview Dr
Water Lily Ct
Mingo Branch
Lakeview Ter
Granny Ln
McCall Rd
Nolly Rd
Cotton Plant

SYMBOL LEGEND

N1 (SEE NOTE ie., #1 – SEE NOTES ON THIS SHEET)
RM (REMOVE EXISTING MATERIALS)
⟹ (STORMWATER SURFACE FLOW)
ISB (INLET SEDIMENT BARRIER – SEE CONSTRUCTION DETAILS)
SILT (SILT FENCE – SEE CONSTRUCTION DETAILS)

McNEIL CARROLL
SCALE
1" = 30'

NORTH BAY HAVEN
CHARTER ACADEMY

101
13.61
SNDLB6745 TRAV

102
13.64
SNDLB6745 TRAV

PARCEL ID #11344-020-000
BAY HAVEN CHARTER ACADEMY, INC
O.R. BOOK 3480, PAGE 342

(SE)INV.24"CPP=14.88'

TBM#1
N:450591.00'
E:1622238.95'
ELEV.:21.15'

GATE
SPIGOT
STORM INLET:
TOP ELEV.=23.85'
(NW)INV.24"CPP=16.89'
(E)INV.24"CPP=17.00'
(S)INV.18"CPP=18.65'
SCOREBOARD
6' CHAIN LINK FENCE
LIMITS OF SPOIL MOUND
STORM INLET:
TOP ELEV.=23.90'
(E)INV.24"CPP=17.85'
(W)INV.18"CPP=17.72'
(S)INV.24"CPP=17.62'
BLEACHERS
BUILDING OVERHANG
SINGLE STORY
BLOCK BUILDING
F.F.E.=24.54'
STORM INLET:
TOP ELEV.=23.82'
(W)INV.18"CPP=21.44'
(S)INV.18"CPP=21.42'
24" DIA. STORM INLET:
TOP ELEV.=24.65'
(S)INV.18"PVC=19.39'
GATE
TBM#2
N:450593.34'
E:1622661.04'
ELEV.:28.84'
24" DIA. STORM INLET:
TOP ELEV.=25.14'
(N)INV.18"PVC=19.35'
6' CHAINLINK FENCE
WEST RIGHT-OF-WAY LINE
10' UTILITY EASEMENT
10.0'
MILL BAYOU BOULEVARD
(90' R/W)
FLAG POLE
WITH CONCRETE BASE
GOAL POST
SILT
RM
GOAL POST
SILT
RM
SCOREBOARD
POST
ISB
STORM INLET:
TOP ELEV.=21.05'
(NE)INV.18"CPP=19.33'
STORM INLET:
TOP ELEV.=23.96'
(N)INV.18"CPP=18.71'
(E)INV.18"CPP=19.04'
(SW)INV.18"CPP=19.01'
SILT
BLEACHERS
STORM INLET:
TOP ELEV.=23.83'
(N)INV.24"CPP=18.55'
(E)INV.18"CPP=18.54'
(W)INV.18"CPP=18.57'
STORM INLET
TOP ELEV.=23.67'
(N)INV.18"CPP=21.22'
(W)INV.18"CPP=18.60'
SILT
ISB
PRIVATE ROAD (ASPHALT)
15' X 264' EASEMENT FOR INGRESS & EGRESS O.R.B. 1951, PAGE 1709
TBM#3
N:450256.29'
E:1622222.79'
ELEV.:36.17'
EASEMENT RESERVED FOR STATE RIGHT OF WAY BY
TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA
(DEED BOOK 99, PAGE 569)
60.0'
100.0'
F.D.O.T. R/W LINE
6' CHAINLINK FENCE
CENTERLINE OF COUNTY ROAD 390
(STATE ROAD 390)
PER F.D.O.T. R/W MAP No. 4660-150
COUNTY ROAD 390
(STATE ROAD 390)
(R/W VARIES)
OLD F.D.O.T. R/W LINE

SITE DEMOLITION DRAWING NOTES:

1. SEE SYMBOL LEGEND ON THIS SHEET FOR SYMBOL INFORMATION AND REFERENCED DETAILS.
2. ALL DEMOLISHED MATERIALS (ie., SIGNS, CONCRETE, ASPHALT, ETC...) TO BE REMOVED AND DISPOSED OF IN A LEGAL MANNER.
3. ALTHOUGH EVERY ATTEMPT TO LOCATE UNDERGROUND UTILITIES HAS BEEN MADE, THERE IS THE POSSIBILITY OF UNDERGROUND GAS, ELECTRICAL, WATER SEWER, ETC... THAT HAS NOT BEEN LOCATED. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
4. THE DEVELOPER AND/OR CONTRACTOR IS RESPONSIBLE FOR FOLLOWING REQUIRED WASTE MANAGEMENT PRACTICES AS DEFINED IN THE BAY COUNTY MUNICIPAL CODE SECTION 22-91 "UNLAWFUL DISPOSAL OF WASTE, FAILURE TO DELIVER WASTE", WHICH MAKES IT UNLAWFUL FOR ANY PERSON TO DUMP, LEAVE OR BURY ANY SOLID WASTE ON PUBLIC OR OR PRIVATE PROPERTY.
5. IT IS THE CONTRACTORS RESPONSIBILITY TO CALL SUNSHINE ONE AT 811 FOR UTILITY LOCATES PRIOR TO CONSTRUCTION.
6. UNLAWFUL DISPOSAL OF WASTE FAILURE TO DELIVER WASTE: IT IS UNLAWFUL FOR ANY PERSON TO DUMP, LEAVE OR BURY ANY SOLID WASTE ON PUBLIC OR PRIVATE PROPERTY. FAILURE TO DISPOSE OF SOLID WASTE AS SPECIFIED IN SECTION 22-149 OF BAY COUNTY MUNICIPALS CODE OF ORDINANCES IS PUNISHABLE UNDER SECTION 1-6".
7. THE DEVELOPER OR DEVELOPER'S DESIGNATED AGENT MUST NOTIFY BAY COUNTY PUBLIC WORKS (JIM FAULKNER (850) 248-8301 – jfaulkner@baycountyfl.gov) AT LEAST 48 HOURS TO COMMENCEMENT OF CONSTRUCTION, INCLUDING LAND CLEARING OPERATION. A NOTICE OF INTENT TO USE NPDES GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES WILL NEED TO BE PROVIDED TO PUBLIC WORKS ENGINEERING DIVISION.
8. EXISTING IRRIGATION SYSTEM SHALL BE ABANDONED IN PLACE.
9. COMMUNICATION BOXES SHALL REMAIN IN PLACE.

SITE EROSION CONTROL DRAWING NOTES:

1. EROSION CONTROL SHALL BE MAINTAINED FOR THE DURATION FOR THE PROJECT.
2. ALL CONSTRUCTION OUTSIDE OF PROPERTY LINES IS SHOWN IN DETAIL ON PERMIT DRAWINGS. (SEE GENERAL NOTES.).
3. SEE SYMBOL LEGEND ON THIS SHEET FOR SYMBOL INFORMATION AND REFERENCED DETAILS.
4. SEE SECTIONS IN CONSTRUCTION DETAILS.
5. SILT FENCE TO BE INSTALLED AT PERIMETER OF SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES WILL BE UTILIZED THROUGHOUT THE CONSTRUCTION PHASE OF THIS PROJECT TO RESTRICT ANY TURBID RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
6. CONTROL OF SEDIMENT-LADEN RUNOFF SHALL BE PROVIDED WITH HAY BALES AND/OR GEOTECH STYLE FABRICS. ALL CONTROL MEASURES SHALL BE PROPERLY LOCATED AND CONSTRUCTED TO PREVENT SEDIMENT TRANSPORT. THE MEANS FOR RETAINING THE SEDIMENTS WILL BE MAINTAINED BY THE CONTRACTOR UNTIL PERMANENT IMPROVEMENTS ARE COMPLETE.
7. THE CONTRACTOR IS RESPONSIBLE FOR TREATING ALL ONSITE STORMWATER DRAINAGE AS REQUIRED TO MEET THE CRITERIA OF 62-3 FLORIDA ADMINISTRATIVE CODE, F.A.C. PRIOR TO DISCHARGE.
8. ALL CATCH BASINS, INLETS AND ACCESSES TO UNDERGROUND STORMWATER SYSTEMS SHALL BE PROTECTED IN ACCORDANCE WITH THE ATTACHED DETAILS.
9. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE TERMS AND CONDITIONS OF ANY STORMWATER PERMITS THAT MAY APPLY (FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, FLORIDA DEPARTMENT OF TRANSPORTATION, BAY COUNTY, WATER MANAGEMENT DISTRICT, ETC.).
10. CONSTRUCTION DRIVES SHALL SLOPE AWAY FROM THE ROADWAY AT A MINIMUM SLOPE OF 2.00% TO DISTANCE OF NOT LESS THAN 15 FEET FROM THE EDGE OF PAVEMENT. THE MAXIMUM WIDTH OF THE DRIVE SHALL BE 30 FEET WITH #57 GRAVEL SURFACE 6 INCHES THICK. SIGNS SHALL BE PLACED (IN ACCORDANCE WITH CITY AND STATE REQUIREMENTS) TO WARN APPROACHING DRIVERS AND PEDESTRIANS.
11. THE DEVELOPER AND/OR CONTRACTOR IS RESPONSIBLE FOR FOLLOWING REQUIRED WASTE MANAGEMENT PRACTICES AS DEFINED IN THE BAY COUNTY MUNICIPAL CODE SECTION 22-91 "UNLAWFUL DISPOSAL OF WASTE, FAILURE TO DELIVER WASTE", WHICH MAKES IT UNLAWFUL FOR ANY PERSON TO DUMP, LEAVE OR BURY ANY SOLID WASTE ON PUBLIC OR OR PRIVATE PROPERTY.
12. THE DEVELOPER AND/OR CONTRACTOR IS RESPONSIBLE FOR OBTAINING COVERAGE UNDER THE FDEP GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES PRIOR TO START OF CONSTRUCTION OR ANY DISTURBANCE OF LAND GREATER THAN 1 ACRE. THE DEVELOPER/CONTRACTOR WILL FORWARD A COPY OF THE PERMIT AND WILL PROVIDE 48 HOUR NOTIFICATION TO THE APPROPRIATE AGENCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL REQUIRED ELEMENTS OF THE SWPP MUST BE IN PLACE PRIOR TO COMMENCEMENT OF CONSTRUCTION. FAILURE TO COMPLY COULD RESULT IN CODE ENFORCEMENT ACTION AND FINES.
13. QUALIFIED PERSONNEL SHALL INSPECT THE FOLLOWING ITEMS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND/OR WITHIN 24 HOURS OF THE END OF A STORM EVENT (RAINFALL) THAT IS A 1/2 INCH OR GREATER:
    A. POINTS OF DISCHARGE TO WATERS OF THE UNITED STATES.
    B. POINTS OF DISCHARGE TO MUNICIPAL SEPARATE STORM WATER SYSTEMS.
    C. DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
    D. AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
    E. STRUCTURAL CONTROLS.
    F. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
14. THE CONTRACTOR SHALL INITIATE REPAIRS WITHIN 24 HOURS OF INSPECTION THAT INDICATE ITEMS ARE NOT IN GOOD WORKING ORDER. TO COMPLY, THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAGES AND DAILY RAINFALL RECORDS. WHERE SITES HAVE BEEN PERMANENTLY STABILIZED, INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH. THE CONTRACTOR SHALL ALSO INSPECT AND CERTIFY THAT CONTROLS INSTALLED IN THE FIELD AGREE WITH THE LATEST STORMWATER POLLUTION PREVENTION PLAN.
15. IF INSPECTIONS INDICATE THAT THE INSTALLED STABILIZATION AND STRUCTURAL PRACTICES ARE NOT SUFFICIENT TO MINIMIZE EROSION, RETAIN SEDIMENT, AND PREVENT DISCHARGING POLLUTANTS, THE CONTRACTOR SHALL PROVIDE ADDITIONAL MEASURES, WHERE SITES HAVE BEEN PERMANENTLY STABILIZED, INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH. AS NEEDED.
16. RECORDS OF THE INSPECTIONS AND THE CONSTRUCTION PERMIT MUST BE MAINTAINED AT THE CONSTRUCTION SITE AND BE READILY AVAILABLE FOR INSPECTION.
17. ALL STORMWATER MANAGEMENT FACILITIES AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, DEMOLITION OR OTHER DISTURBANCE TO THE SUBJECT SITE.

CONSTRUCTION SEQUENCE AND BMP'S NWFWMD

18. THE INITIAL PART OF THE CONSTRUCTION PROCESS SHALL BE THE INSTALLATION OF SILT FENCE AROUND THE PERIMETER OF THE AREA THAT IS TO BE DISTURBED TO ENSURE NO TURBID RUNOFF LEAVES THE CONSTRUCTION SITE. THE SILT FENCE SHALL BE INSTALLED PER THE CONSTRUCTION DETAILS. IF THERE IS A POSSIBILITY OF RUNOFF TO A WATER BODY, TURBIDITY CURTAIN SHALL BE INSTALLED PER THE CONSTRUCTION DETAILS. THE SECOND STEP SHALL BE THE INSTALLATION OF THE CONSTRUCTION ENTRANCE AND DEMOLITION OF ANY EXISTING IMPROVEMENTS AS NEEDED (SEE DEMOLITION PLAN). THE THIRD STEP SHALL BE TO CLEAR AND GRUB AREAS WHERE IMPROVEMENTS ARE TO BE INSTALLED. AS FILL IS BROUGHT INTO THE SITE, THE STORMWATER BASIN SHOULD BE CREATED TO CAPTURE ANY OVERLAND FLOW AND ACT AS A SEDIMENT TRAP. IT IS RECOMMENDED THAT THE BASIN BE CONSTRUCTED APPROXIMATELY ½' HIGHER THAN DESIGN AT THIS POINT TO ENSURE ALL SILTS AND FINES ARE REMOVED AT THE TIME OF FINAL GRADING OF THE STORMWATER BASIN.
19. UPON INSTALLATION OF THE STORM SEWER, HAY BALES AND FILTER FABRICS SHALL BE USED AT ALL INLET OPENINGS PER THE CONSTRUCTION DETAILS TO THE KEEP THE SYSTEM FREE OF SEDIMENTS DURING THE CONSTRUCTION PHASE. DEPENDING ON SITE CONDITIONS AND SIZE, SEDIMENT TRAPS SHALL BE UTILIZED TO PREVENT TURBID RUNOFF FROM LEAVING THE SITE (SEE EROSION CONTROL PLAN).
20. EROSION CONTROL MEASURES SHALL BE UTILIZED THROUGHOUT THE CONSTRUCTION PHASE OF THIS PROJECT AND BE MANAGED IN ACCORDANCE THE THE STATE NPDES PROGRAM.

PERMIT PURPOSES ONLY

DEMOLITION & EROSION CONTROL PLAN
NORTH BAY HAVEN SYNTHETIC TURF
NORTH BAY HAVEN
LYNN HAVEN, FLORIDA

SCALE: SHOWN
DESIGNED BY: JFP
DRAWN BY: JFP
REVIEWED BY: SDM
ISSUE DATE: 11/18/2026
C/D: 240.182E01
NOT RELEASED FOR CONSTRUCTION BY:
DATE:

McNEIL CARROLL ENGINEERING, INC.
Professional Engineering Consultants
STATE OF FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER: 7288
475 Harrison Avenue, Suite 200
Panama City, Florida 32401
850-763-5730

NO.	DATE	BY	REVISIONS
01			
02			
03			
04			
05			

Sean D. McNeil, P.E.
PROFESSIONAL ENGINEER
FL LC # 49303

Robert L. Carroll, P.E.
PROFESSIONAL ENGINEER
FL LC # 57988

11/18/26

SHEET NUMBER 1 OF 7

240.182 – NORTH BAY HAVEN SYNTHETIC TURF

I:\PC-PROJECTS\240.182 - NORTH BAY HAVEN - SYNTHETIC TURF\PHASE 1\240.182 - 11/18/2026 10:03:31 AM
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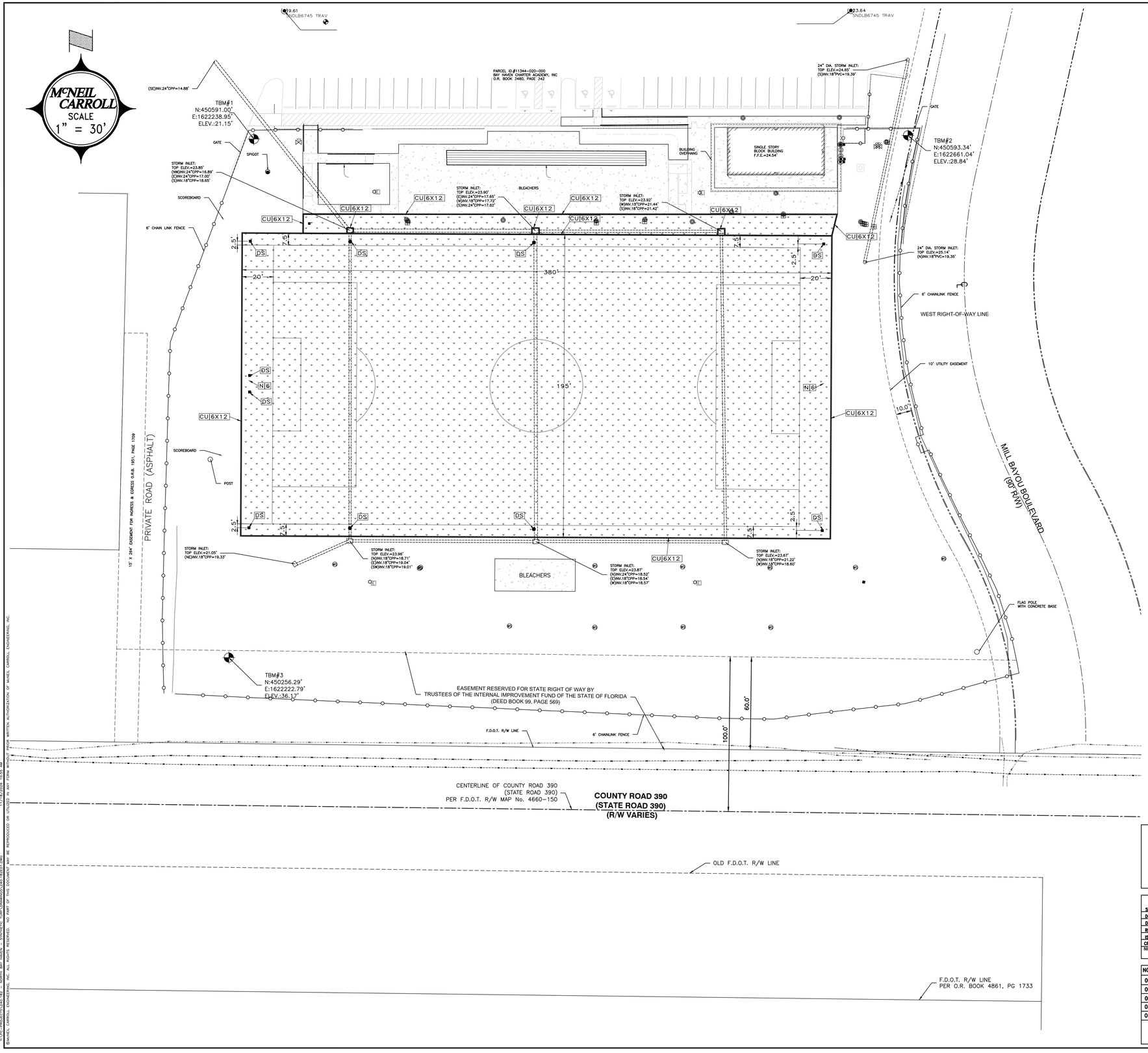
McNEIL CARROLL
SCALE
1" = 30'



SITE LAYOUT DRAWING NOTES:

1. ALL RADII AT FACE OF CURB ARE 5' UNLESS OTHERWISE SHOWN.
2. CONTRACTOR SHALL PROVIDE McNEIL CARROLL ENGINEERING, INC. FIVE (5) SETS OF AS-BUILT DRAWINGS AND ONE (1) DIGITAL COPY (AUTOCAD FORMAT) OF THE COMPLETED PROJECT. DRAWINGS SHALL BE PREPARED AND SIGNED & SEALED BY A FLORIDA REGISTERED SURVEYOR.
3. ALL DIMENSIONS AT CURB ARE FROM FACE OF CURB.
4. ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION AND SODDED PER FDOT INDEX 105.
5. A COPY OF ALL REGULATORY PERMITS SHALL BE KEPT ON SITE.
6. CONTRACTOR SHALL SUPPLY AND INSTALL FOOTBALL GOAL POST AND PADS
7. CONTRACTOR SHALL PROVIDE STRIPING PER OWNERS SPECIFICATION. CONTRACTOR IS RESPONSIBLE FOR CORRECT DIMENSIONS OF THE FIELD STRIPING AND GOAL POST.

SYMBOL LEGEND

CU 6X12 (6" X 12" CONCRETE RIBBON CURB – SEE CONSTRUCTION DETAILS)
DS (DRAINAGE STRUCTURE – SEE GRADING & DRAINAGE PLAN)
N 1 (SEE NOTE ie., #1 – SEE NOTES ON THIS SHEET)

SITE DATA TABLE
PARCEL ID: 11344-020-000
GOVERNING ENTITY – BAY DISTRICT SCHOOLS / BAY COUNTY
ZONING – PUBLIC/INSTITUTIONAL – (PI)

PERMIT PURPOSES ONLY

LAYOUT PLAN
NORTH BAY HAVEN SYNTHETIC TURF
NORTH BAY HAVEN
LYNN HAVEN, FLORIDA

SCALE:	SHOWN
DESIGNED BY:	JFP
DRAWN BY:	JFP
REVIEWED BY:	SDM
ISSUE DATE:	11/18/2026
C/To:	240.187C01
NOT RELEASED FOR CONSTRUCTION BY: DATE:	

McNEIL CARROLL ENGINEERING, INC.
Professional Engineering Consultants
STATE OF FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER: 7288
475 Harrison Avenue, Suite 200
Panama City, Florida 32401
850-763-5730

NO.	DATE	BY	REVISIONS
01			
02			
03			
04			
05			

Sean D. McNeil, P.E.
PROFESSIONAL ENGINEER
FL LIC # 49303

Robert L. Carroll, P.E.
PROFESSIONAL ENGINEER
FL LIC # 57988

11/18/26

SHEET NUMBER 2 OF 7

240.182 – NORTH BAY HAVEN SYNTHETIC TURF

I:\LYC-PROJECTS\240.182 - NORTH BAY HAVEN - SYNTHETIC TURF\SUBMISSION\240.182 - LAYOUT.DWG 11/17/2026 10:09 AM JFP
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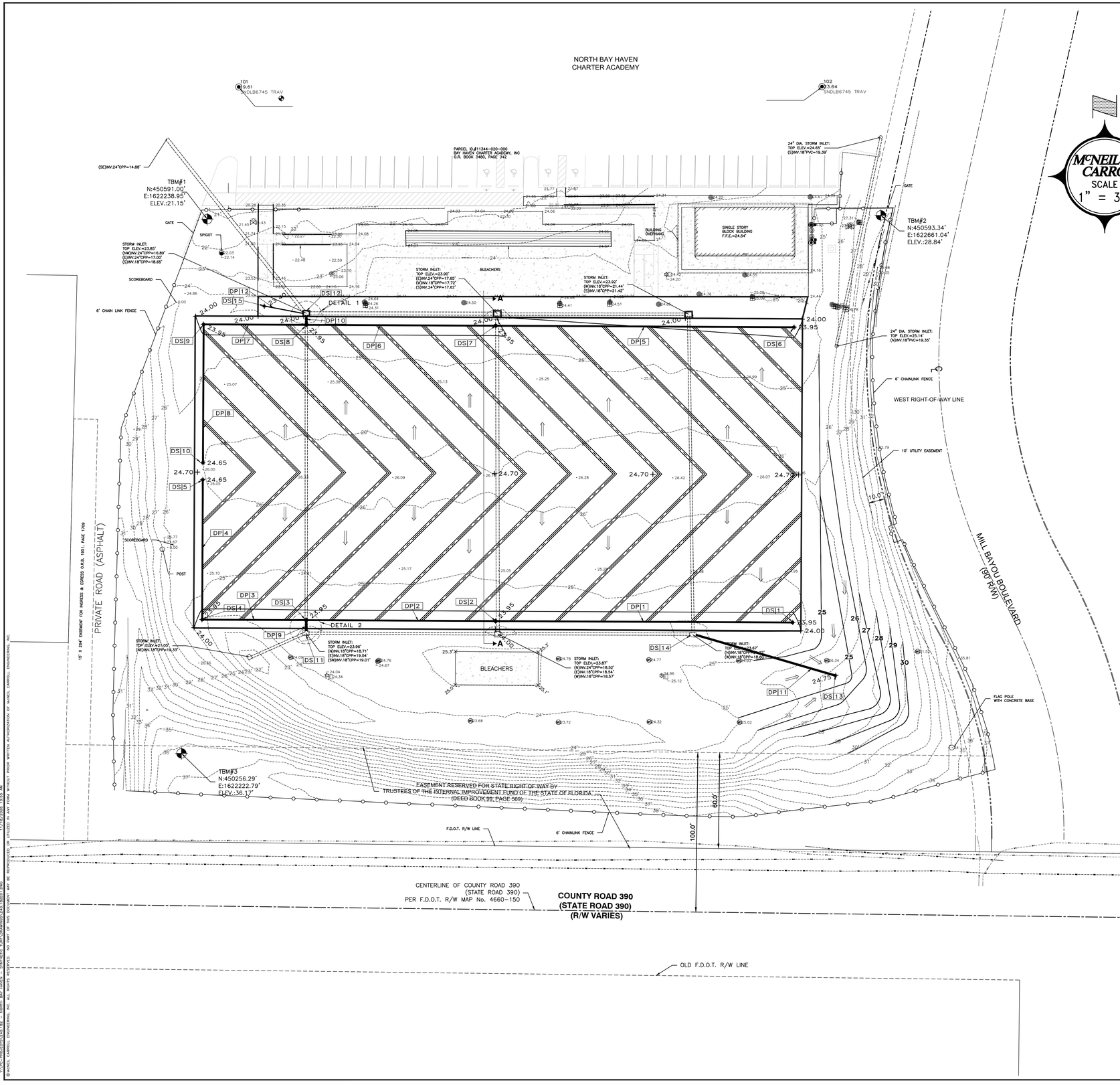

McNEIL CARROLL
SCALE
1" = 30'

SITE GRADING AND DRAINAGE DRAWING NOTES:

1. SEE SYMBOL LEGEND ON THIS SHEET FOR SYMBOL INFORMATION AND REFERENCED DETAILS.
2. ALL DEMOLISHED MATERIALS (ie., SIGNS, CONCRETE, ASPHALT, ETC...) TO BE REMOVED AND DISPOSED OF IN A LEGAL MANNER.
3. SEE SECTIONS IN CROSS SECTIONS PAGE 5.
4. CONTRACTOR SHALL PROVIDE McNEIL CARROLL ENGINEERING, INC. FIVE (5) SETS AND ONE (1) DIGITAL COPY (AUTOCAD FORMAT) OF AS-BUILT DRAWINGS OF THE COMPLETED PROJECT. DRAWINGS SHALL BE PREPARED AND SIGNED & SEALED BY A FLORIDA REGISTERED SURVEYOR.
5. IT IS THE CONTRACTORS RESPONSIBILITY TO CALL SUNSHINE ONE AT 811 FOR UTILITY LOCATES PRIOR TO CONSTRUCTION.
6. ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION AND SODDED PER FDOT INDEX 105.
7. CONTRACTOR SHALL TIE INTO TOP OF EXISTING PIPE.

SYMBOL LEGEND

34.60 (EXISTING SPOT ELEVATION)
36 (EXISTING CONTOUR)
+12.50 (PROPOSED FINISHED GRADE)
(STORMWATER SURFACE FLOW)
DP16 (SEE DRAINAGE PIPE SCHEDULE THIS SHEET ie.,#16)
DS12 (SEE DRAINAGE STRUCTURE SCHEDULE THIS SHEET ie.,#12)
N1 (SEE NOTE ie.,#1 - SEE NOTES THIS SHEET)

DRAINAGE PIPE SCHEDULE

NO.	SIZE	LF	TYPE	SLOPE
DP1	12"	185	PERFORATED ADS PIPE	0.20%
DP2	12"	117	PERFORATED ADS PIPE	0.20%
DP3	12"	64	PERFORATED ADS PIPE	1.87%
DP4	12"	87	PERFORATED ADS PIPE	0.20%
DP5	12"	186	PERFORATED ADS PIPE	0.20%
DP6	12"	117	PERFORATED ADS PIPE	0.20%
DP7	12"	63	PERFORATED ADS PIPE	1.90%
DP8	12"	85	PERFORATED ADS PIPE	0.20%
DP9	15"	6	ADS	0.83%
DP10	15"	5	ADS	1.00%
DP11	15"	90	ADS	1.66%
DP12	6"	25	ADS	2.00%

ALL ADS PIPE SHALL BE AS SHOWN OR EQUAL
ALL PERFORATED PIPE SHALL HAVE A GRAVEL PACK
ALL ADS PIPE SHALL BE RATED N-12
SEE CONSTRUCTION DETAILS.

DRAINAGE STRUCTURE SCHEDULE

NO.	TYPE STRUCTURE	TOP OF GRATE	PIPE INVERT
DS1	12" ADS INLINE DRAIN W/ ELBOW & SOLID COVER	EL. 23.95	EL. 21.75 W.
DS2	12" ADS INLINE INLET W/ TEE & SOLID COVER	EL. 23.95	EL. 21.55 E., W.
DS3	18" ADS CATCH BASIN W/ SOLID COVER	EL. 23.95	EL. 21.10 E. W. S.
DS4	15" ADS CATCH BASIN W/ SOLID COVER	EL. 23.95	EL. 22.30 N. E.
DS5	12" ADS INLINE DRAIN W/ ELBOW & SOLID COVER	EL. 24.65	EL. 22.50 S.
DS6	12" ADS INLINE DRAIN W/ ELBOW & SOLID COVER	EL. 23.95	EL. 21.75 W.
DS7	12" ADS INLINE INLET W/ TEE & SOLID COVER	EL. 23.95	EL. 21.55 E. W.
DS8	18" ADS CATCH BASIN W/ SOLID COVER	EL. 23.95	EL. 21.10 E. W. S.
DS9	15" ADS CATCH BASIN W/ SOLID COVER	EL. 23.95	EL. 22.30 N. E.
DS10	12" ADS INLINE DRAIN W/ ELBOW & SOLID COVER	EL. 24.65	EL. 22.50 S.
DS11	EXISTING INLET	EL. 23.96	EL. 21.05 N. PROPOSED
DS12	EXISTING INLET	EL. 23.85	EL. 21.05 W. S. PROPOSED
DS13	15" ADS INLINE DRAIN W/ ELBOW	EL. 24.75	EL. 22.50 W.
DS14	EXISTING INLET	EL. 23.64	EL. 21.00 E. PROPOSED
DS15	6" ADS INLINE DRAIN W/ ELBOW	EL. 23.40	EL. 22.00 E.

SEE CONSTRUCTION DETAILS.

PERMIT PURPOSES ONLY

GRADING AND DRAINAGE PLAN
NORTH BAY HAVEN SYNTHETIC TURF
NORTH BAY HAVEN
LYNN HAVEN, FLORIDA

SCALE: SHOWN
DESIGNED BY: JFP
DRAWN BY: JFP
REVIEWED BY: SDM
ISSUE DATE: 11/18/2026
CF/Dr: 240.182E01
NOT RELEASED FOR CONSTRUCTION BY: DATE:

McNEIL CARROLL ENGINEERING, INC.
Professional Engineering Consultants
STATE OF FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER: 7288
475 Harrison Avenue, Suite 200
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Sean D. McNeil, P.E.
PROFESSIONAL ENGINEER
FL LC # 49303

Robert L. Carroll, P.E.
PROFESSIONAL ENGINEER
FL LC # 57988

11/18/26

SHEET NUMBER 3 OF 7

240.182 - NORTH BAY HAVEN SYNTHETIC TURF

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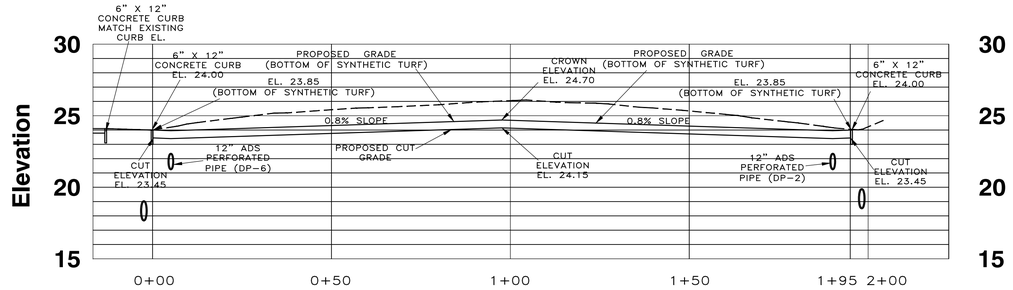
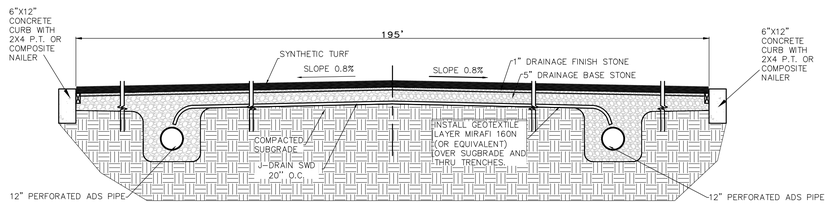
NOTES:
1. BACKFILL SHOULD CONSIST OF SAND CONTAINING LESS THAN 15 PERCENT MATERIAL PASSING THE NO. 200 SIEVE. THE MATERIAL SHOULD BE FREE OR RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATTER. BACKFILL SHOULD BE PLACES IN LOOSE LIFTS NO GREATER THAN 12 INCHES THICK AND COMPACTED TO AT LEAST 95 PERCENT OF THE SOIL'S MODIFIED PROCTOR MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.
2. IF THE CONTRACTOR ENCOUNTERS ANY UNSUITABLE SOILS, PLEASE CONTACT THE ENGINEER OF RECORD.

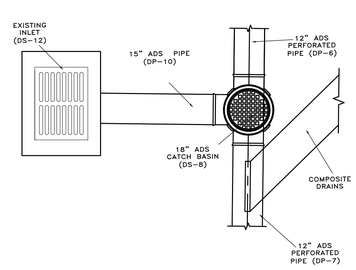


NOTE: CROWN ELEVATION IS BOTTOM OF SYNTHETIC TURF

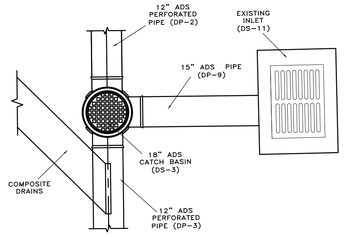
SECTION - A
Horizontal Scale: 1"=30'
Vertical Scale: 1"=8'



SECTION THROUGH FIELD
NOT TO SCALE



SECTION - 1



SECTION - 2

PERMIT PURPOSES ONLY

CROSS SECTIONS
NORTH BAY HAVEN SYNTHETIC TURF
NORTH BAY HAVEN
LYNN HAVEN, FLORIDA

SCALE: SHOWN
DESIGNED BY: JFP
DRAWN BY: JFP
REVIEWED BY: SDM
ISSUE DATE: 11/18/2026
CF/D: 240.182E01
NOT RELEASED FOR CONSTRUCTION BY:
DATE:

McNEIL CARROLL ENGINEERING, INC.
Professional Engineering Consultants
475 Harrison Avenue, Suite 200
Panama City, Florida 32401
850-763-5730
STATE OF FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER: 7288

NO.	DATE	BY	REVISIONS
01			
02			
03			
04			
05			

Sean D. McNeil, P.E.
PROFESSIONAL ENGINEER
FL LC # 49303

Robert L. Carroll, P.E.
PROFESSIONAL ENGINEER
FL LC # 57988

11/18/26

SHEET NUMBER
4 OF 7

240.182 – NORTH BAY HAVEN SYNTHETIC TURF

Y:\PROJECTS\240.182 - NORTH BAY HAVEN - SYNTHETIC TURF\DRAWINGS\240.182E01.DWG 11/18/2026 10:55 AM
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GENERAL NOTES

PREVENTION, CONTROL AND ABATEMENT OF EROSION

ALL ON AND OFF SITE WORK INCLUDED CONSISTS OF BUT NOT LIMITED TO THE FOLLOWING:

I0.2643; SEEDING AND MULCHING OR SODDING FOR STABILIZATION.

CONSTRUCTION OF SEDIMENT BASINS, CHECK DAMS OR FLOATING BARRIERS.

PLACEMENT OF SILTATION FENCES DURING THE COURSE OF CONSTRUCTION.

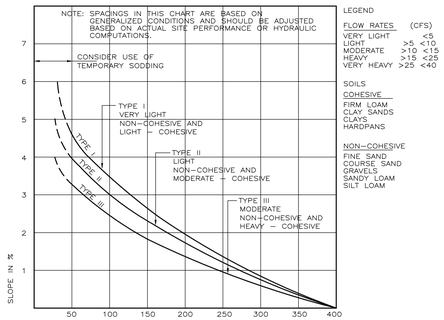
SILT FENCE TO BE INSTALLED AT PERIMETER OF SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES WILL BE UTILIZED THROUGHOUT THE CONSTRUCTION PHASE OF THIS PROJECT TO RESTRICT ANY TURBID RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CONTROL OF SEDIMENT–LADEN RUNOFF SHALL BE PROVIDED WITH HAY BALES AND/OR GEOTECH STYLE FABRICS. ALL CONTROL MEASURES SHALL BE PROPERLY LOCATED AND CONSTRUCTED TO PREVENT SEDIMENT TRANSPORT. THE MEANS FOR RETAINING THE SEDIMENTS WILL BE MAINTAINED BY THE CONTRACTOR UNTIL PERMANENT IMPROVEMENTS ARE COMPLETE.

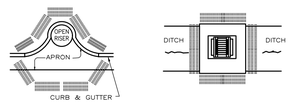
THE CONTRACTOR IS RESPONSIBLE FOR TREATING ALL ONSITE STORM WATER DRAINAGE AS REQUIRED TO MEET THE CRITERIA OF 62–3 FLORIDA ADMINISTRATIVE CODE, F.A.C. PRIOR TO DISCHARGE.

ALL CATCH BASINS, INLETS AND ACCESSES TO UNDERGROUND STORM WATER SYSTEMS SHALL BE PROTECTED IN ACCORDANCE WITH THE ATTACHED DETAILS.

THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE TERMS AND CONDITIONS OF ANY STORM WATER PERMITS THAT MAY APPLY (FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, FLORIDA DEPARTMENT OF TRANSPORTATION, BAY COUNTY, WATER MANAGEMENT DISTRICT, ETC.).



FDOT CHART I (BALED HAY OR STRAW BARRIERS AND SILT FENCES - INDEX 102

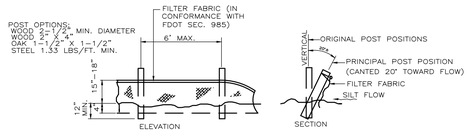


PARTIAL INLET

DITCH BOTTOM INLET

ANCHOR BALES WITH 2 – 2"X2"X4' STAKES PER BALE (SEE DETAIL)

PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

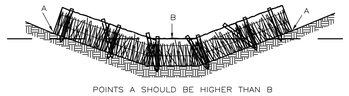


NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR THE STAKED SILT FENCE (LF.)

TYPE III SILT FENCE

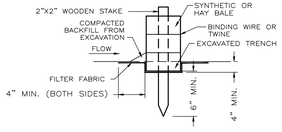
NOTE:

I0.315,T0.252;DO NOT DEPLOY SILT FENCES IN A MANNER THAT WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES.
SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND AS TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.
SILT FENCE SHOULD BE REPLACED EVERY SIX (6) MONTHS.
SILT FENCE SHALL EXTEND A MINIMUM OF 4" BELOW GRADE.
SILT FENCE SHALL EXTEND 4" AWAY FROM STAKES.



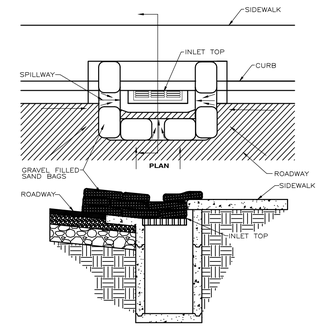
POINTS A SHOULD BE HIGHER THAN B

PROPER PLACEMENT OF BALES IN DRAINAGE WAY



EROSION CONTROL DETAILS

NOT TO SCALE

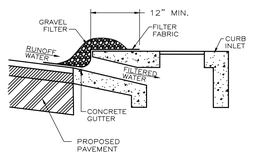


NOTE:

1. GRAVEL FILLED BAGS TO BE PLACED TIGHTLY TOGETHER AS TO NOT ALLOW ANY GAPS IN BETWEEN THE BAGS VERTICALLY AND HORIZONTALLY.
2. IF SEDIMENT IS PENETRATING BAGS, BAGS MAY NEED TO BE WRAPPED IN ADDITIONAL FILTER FABRIC.

CURB INLET SEDIMENT BARRIER (OPTION 1)

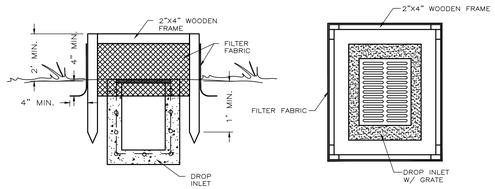
NOT TO SCALE



NOTES:
1. GRAVEL SHALL BE #57 STONE.

GRAVEL CURB INLET SEDIMENT FILTER (OPTION 2)

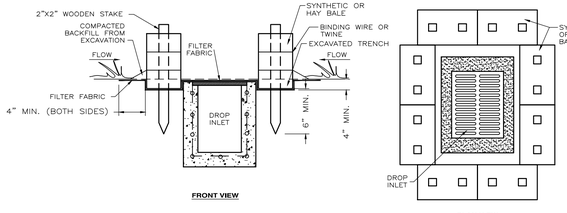
NOT TO SCALE



NOTES:
1. TOP FRAME REQUIRED FOR STABILITY.
2. THIS METHOD OF INLET PROTECTION IS NOT TO BE USED IN RIGHT–OF–WAYS OR MEDIANS.
3. STAKES SHALL EXTEND 1' MIN. BELOW GRADE.
4. FILTER FABRIC SHALL EXTEND 4" MIN. BELOW GRADE AND 4" MIN. BEYOND WOODEN FRAME.

DROP INLET SEDIMENT FILTER OPTION 1

NOT TO SCALE



DROP INLET SEDIMENT FILTER OPTION 2

NOT TO SCALE

WORK IN RIGHTS-OF-WAYS

ALL WORK WITHIN RIGHTS–OF–WAYS SHALL BE IN STRICT ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE RESPECTIVE AGENCIES.

THE CONTRACTOR SHALL COOPERATE WITH THE GOVERNING STATE AND LOCAL AGENCIES IN ALL PROCEDURES, MATERIALS AND METHODS OF CONSTRUCTION.

ALL OFF–SITE WORK INCLUDED CONSISTS OF BUT IS NOT LIMITED TO THE FOLLOWING:

CONSTRUCTION OF DRIVEWAY CONNECTIONS TO EXISTING MUNICIPAL ROADWAYS AS SHOWN ON PLANS.

PLACEMENT OF ABOVE OR BELOW GROUND UTILITIES AND CONNECTION TO EXISTING UTILITIES AS SHOWN ON PLANS.

SITE CLEARING AND DEMOLITION

ANY WORK WITHIN STREET OR HIGHWAY RIGHT–OF–WAY SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE GOVERNMENTAL AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL THESE GOVERNING AUTHORITIES HAVE BEEN NOTIFIED AND PROPER PERMITS OBTAINED.

KEEP ALL AREAS WITHIN THE CONSTRUCTION AREA SUFFICIENTLY DAMPENED TO PREVENT DUST FROM RISING DUE TO CONSTRUCTION. COMPLY WITH ALL ANTI–POLLUTION ORDINANCES.

THIS SUBCONTRACTOR SHALL SEE TO IT THAT TRUCKS LEAVING THE SITE SHALL DO SO IN SUCH A MANNER THAT MUD AND EARTH WILL NOT BE DEPOSITED ON ADJACENT STREET PAVEMENTS, ANY MUD OR EARTH DEPOSITED ON STREET PAVEMENTS SHALL BE PROMPTLY REMOVED BY THIS SUBCONTRACTOR.

ALL CLEARING SHALL BE PERFORMED IN A MANNER SUCH AS TO PREVENT ANY WASH–OFF OF SOILS FROM THE SITE INTO STREAMS AND/OR STORM DRAINAGE SYSTEMS. APPROPRIATE SEDIMENTATION PONDS, DIKES, COLLARS, AND FILTER MEDIA SHALL BE EMPLOYED TO INSURE COMPLIANCE WITH THESE REQUIREMENTS. WHERE A SPECIFIC STATUTE GOVERNS THESE PROCEDURES, SUCH STATUTE SHALL BE COMPLIED WITH IN IT'S ENTIRETY.

TOPSOIL IS DEFINED AS FRIABLE CLAY LOAM SURFACE SOIL FOUND IN A DEPTH OF NOT LESS THAN 4". SATISFACTORY TOPSOIL IS REASONABLY FREE OF SUBSOIL, CLAY LUMPS, STONES, AND OTHER OBJECTS OVER 2" IN DIAMETER, AND WITHOUT WEEDS, ROOTS, AND OTHER OBJECTIONABLE MATERIAL.

STRIP TOPSOIL TO WHATEVER DEPTHS ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OTHER OBJECTIONABLE MATERIAL.

REMOVE HEAVY GROWTHS OF GRASS FROM AREAS BEFORE STRIPPING. WHERE TREES ARE INDICATED TO BE LEFT STANDING, STOP TOPSOIL STRIPING A SUFFICIENT DISTANCE TO PREVENT DAMAGE TO MAIN ROOT SYSTEM. DISPOSE OF UNSUITABLE OR EXCESS TOPSOIL SAME AS WASTE MATERIAL, HEREIN SPECIFIED.

BURNING WILL NOT BE PERMITTED ON PROJECT SITE.

ALL EXISTING STRUCTURES, UTILITIES AND OTHER OBSTACLES IN CONFLICT WITH THE PROPOSED FACILITY SHALL BE REMOVED AND DISPOSED OF IN A LEGAL MANNER. SEE OTHER UTILITY AND MISCELLANEOUS NOTES CONCERNING REMOVAL.

ALLOW TESTING SERVICES TO INSPECT AND APPROVE SUBGRADE AND FILL LAYERS BEFORE FURTHER CONSTRUCTION WORK IS PERFORMED.

ATTENTION IS CALLED TO THE FACT THAT THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES TO OBTAIN LOCATIONS OF ALL EXISTING UTILITIES OR OBSTRUCTIONS WHICH HE MAY ENCOUNTER DURING CONSTRUCTION.

AFTER LOCATION OF UTILITIES BY THE APPROPRIATE UTILITY COMPANY, IT IS THE CONTRACTOR'S LIABILITY TO PROTECT ALL SUCH UTILITY LINES, INCLUDING SERVICE LINES AND APPURTENANCES, AND TO REPLACE AT HIS OWN EXPENSE ANY WHICH MAY BE DAMAGED BY THE CONTRACTOR'S EQUIPMENT OR FORCES DURING CONSTRUCTION.

TO PROTECT PERSON FROM INJURY AND TO AVOID PROPERTY DAMAGE, ADEQUATE BARRICADES, CONSTRUCTION SIGNS, TORCHES, RED LANTERNS AND GUARDS AS REQUIRED SHALL BE PLACED AND MAINTAINED DURING THE PROGRESS OF THE CONSTRUCTION WORK.

ADEQUATE PROVISION SHALL BE MADE FOR THE FLOW OF SEWERS, DRAINS, AND WATER COURSES ENCOUNTERED DURING CONSTRUCTION, AND THE STRUCTURES WHICH MAY HAVE BEEN DISTURBED SHALL BE SATISFACTORILY RESTORED BY THE CONTRACTOR.

EXCAVATING, FILLING AND GRADING

ALL ON AND OFF–SITE WORK INCLUDED CONSISTS OF BUT IS NOT LIMITED TO THE FOLLOWING:

ALL ON AND OFF–SITE PREPARATION WORK FOR EXCAVATION, PIPE BED PREPARATION AND BACKFILL FOR UNDERGROUND UTILITIES.

COMPACTION OF BACKFILL.

REMOVAL OF ALL EXCESS OR UNUSABLE MATERIAL.

APPROVAL REQUIRED: ALL FILL MATERIAL SHALL BE SUBJECT TO APPROVAL OF THE GEO–TECHNICAL ENGINEER.

ALL ON–SITE FILL MATERIAL SHALL BE SOIL–ROCK MIXTURE WHICH IS FREE FROM ORGANIC MATTER (LESS THAN 3% BY IGNITION), AND OTHER DELETERIOUS SUBSTANCE. IT SHALL CONTAIN NO ROCKS OR LUMPS OVER SIX (6) INCHES IN GREATEST DIMENSION AND NOT MORE THAN 15% OF THE ROCKS OR LUMPS BY DRY WEIGHT, SHALL BE LARGER THAN 2 AND 1/2 INCHES IN GREATEST DIMENSION.

ALL IMPORTED FILL MATERIAL SHALL MEET THE REQUIREMENTS OF ON–SITE FILL MATERIAL AND SHALL IN ADDITION, BE PREDOMINANTLY GRANULAR WITH A MAXIMUM PARTICLE SIZE OF TWO (2) INCHES AND A PLASTICITY INDEX OF 12 OR LESS.

ALL ON–SITE FILL MATERIAL USED FOR TRENCH AND STRUCTURAL BACKFILL SHALL MEET THE REQUIREMENTS OF ARTICLE ABOVE.

ALL IMPORTED COHESIONLESS MATERIAL USED FOR TRENCH AND STRUCTURAL BACKFILL SHALL BE FREE FROM ORGANIC SUBSTANCE (LESS THAN 3% BY IGNITION) AND OTHER DELETERIOUS MATTER, SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

PRIOR TO ALL WORK OF THIS SECTION, CONTRACTOR IS TO BECOME THOROUGHLY FAMILIAR WITH THE SITE, THE SITE CONDITIONS, AND ALL PORTIONS OF THE WORK, FALLING WITHIN THIS SECTION.

DO NOT ALLOW OR CAUSE ANY OF THE WORK PERFORMED OR INSTALLED TO BE COVERED UP OR ENCLOSED BY WORK OF THIS SECTION PRIOR TO ALL REQUIRED INSPECTIONS, TESTS AND APPROVALS.

AFTER THE WORK HAS BEEN COMPLETELY TESTED, INSPECTED AND APPROVED, MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO RESTORE THE WORK TO THE CONDITION IN WHICH IT WAS FOUND AT THE TIME OF UNCOVERING, ALL AT NO ADDITIONAL COST TO THE OWNER.

FOR SETTING AND ESTABLISHING FINISH ELEVATIONS AND LINES, SECURE THE SERVICES OF A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR ACCEPTABLE TO THE OWNER. CAREFULLY PRESERVE ALL DATA AND ALL MONUMENTS SET BY THE CIVIL ENGINEER OR LAND SURVEYOR, AND IF DISPLACED OR LOST, IMMEDIATELY REPLACE TO THE APPROVAL OF THE OWNER AND AT NO ADDITIONAL COST TO THE OWNER.

PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, ETC. NECESSARY AND INCIDENTAL TO THE COMPLETION OF ALL EARTHWORK AS SHOWN ON THE DRAWINGS AND SPECIFICATIONS. ALL OFF–SITE WORK INCLUDED CONSISTS OF BUT IS NOT LIMITED TO THE FOLLOWING: THIS WORK CONSISTS OF GRADING IN ORDER TO ACHIEVE FINISHED ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS.

ALL GRADED SURFACES SHALL BE SMOOTH AND UNIFORM, WITHOUT ABRUPT CHANGES IN SLOPE OR GRADE. AREAS TO BE COVERED WITH PAVING SHALL BE FINISHED TO THE REQUIRED ELEVATIONS AND SLOPES. FINISHED SURFACES IN ALL OTHER AREAS MAY VARY UP TO 0.1 FEET FROM THE REQUIRED ELEVATIONS.

PERFORM EXCAVATION WORK IN COMPLIANCE WITH APPLICABLE REQUIREMENTS OF GOVERNING AUTHORITIES HAVING JURISDICTION. ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH SECTION 120 OF THE STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION, LATEST EDITION.

EMPLOY, AT CONTRACTOR'S EXPENSE, DESIGN LABORATORY TO PERFORM SOIL TESTING AND INSPECTION SERVICE FOR QUALITY CONTROL TESTING DURING EARTHWORK OPERATIONS. SUBMIT FOLLOWING REPORTS DIRECTLY TO ENGINEER AND COPIES TO CITY ENGINEERING DEPARTMENT FROM THE TESTING SERVICES, WITH COPY TO THE CONTRACTOR.

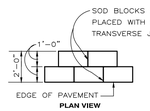
TEST REPORTS ON BORROW MATERIAL.

FIELD DENSITY TEST REPORTS.

ONE OPTIMUM MOISTURE–MAXIMUM DENSITY CURVE FOR EACH TYPE OF SOIL ENCOUNTERED.

WHERE REQUIRED, THE SITE SHALL BE EXCAVATED TO THE GRADES COURSE, EXCAVATED MATERIAL THAT IS SUITABLE SHALL BE USED IN THE FILL SECTIONS OF THE SITE. NO SUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE. ANY EXCESS SUITABLE MATERIAL SHALL BE PLACED AT THE DIRECTION OF THE ENGINEER.

EXCAVATION FOR MANHOLES, CATCH BASINS, AND OTHER ACCESSORIES SHALL BE SUFFICIENT TO LEAVE AT LEAST 12 INCHES IN THE CLEAR BETWEEN THEIR OUTER SURFACES AND THE EMBANKMENT OF TIMBER THAT MAY BE USED TO PROTECT THEM.



THIS WORK CONSISTS OF SODDING AREAS CLEARED DURING CONSTRUCTION AND NOT PAVED, OR AS OTHERWISE SHOWN ON THE CONSTRUCTION PLANS. ALL MATERIAL AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH SECTION 570, 571, 573, OR 575 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST REVISION.

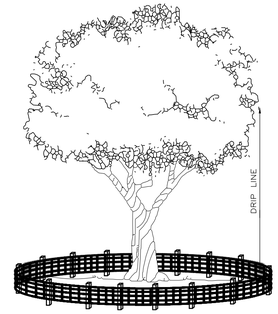
USE ST. AUGUSTINE GRASS (FLORATAM) SOD. THE SOD SHALL BE LIVE, FRESH AND UNINJURED AT THE TIME OF PLANTING AND SHALL HAVE A THICK MAT OF ROOTS WITH ENOUGH ADHERING SOIL TO ASSURE GROWTH. APPLY SOD WITHIN 72 HOURS OF CUTTING OR STACKING TO KEEP MOIST.

PREPARE THE GROUND BY LOOSENING THE SOIL. PLACE SOD ON THE PREPARED SOIL WITH EDGES IN CLOSE CONTACT. STAGGER THE SOD PIECES SO AS TO AVOID A CONTINUOUS DOWNHILL SEAM. TAMP THE OUTER EDGES OF THE SODDED AREA TO PRODUCE A SMOOTH CONTOUR.

KEEP SOD CONTINUOUSLY MOIST TO A DEPTH BELOW THE ROOT ZONE FOR THREE WEEKS AFTER PLACEMENT.

SODDING DETAIL

NOT TO SCALE



CORD FENCE – POSTS WITH A MINIMUM SIZE 2 INCHES SQUARE OR 2 INCHES IN DIAMETER SET SECURELY IN GROUND AND PROTRUDING AT LEAST 4 FEET ABOVE THE GROUND SHALL BE PLACED AT THE LIMITS OF CLEARING WITH ORANGE CONSTRUCTION MESH FENCING RUNNING BETWEEN POSTS.

TREE BARRIER DETAIL

NOT TO SCALE



SEEDING RATE ZONES

TYPE OF SEED	SEEDING RATES (LBS/AC)							
	ZONE I				ZONE II			
	COASTAL		INLAND		COASTAL		INLAND	
	MAR. TO NOV.	NOV. TO MAR.	MAR. TO OCT.	OCT. TO MAR.	FEB. TO DEC.	DEC. TO FEB.	FEB. TO DEC.	DEC. TO FEB.
PERMANENT GRASS								
UNHULLED BERMUDA	15	15	10	15	15	15	10	15
BAHIA ARGENTINA OR PENSACOLA			30	30			30	30
QUICK GROWING								
BROWN TOP MILLET	20		20		20		20	
ANNUAL RYE GRASS		20		20		20		20
TOTAL POUNDS PER ACRE	35	35	60	65	35	35	60	65

NOTE: THE SEEDING RATES SHOWN IN THIS TABLE APPLY ONLY WHEN SEED IS SPREAD BY AN APPROVED MECHANICAL SPREADER MEETING THE REQUIREMENTS OF SECTION 570 AND 577 OF THE STANDARD SPECIFICATIONS.

GENERAL NOTES

1. SPECIAL ATTENTION IS TO BE DIRECTED TO THE CONSTRUCTION OF THE REQUIRED 1" DROP–OFF AT EDGE OF PAVEMENT.
2. FERTILIZE ENTIRE UNPAVED SHOULDER AND FRONT SLOPE TO TOE OF SLOPE OR BOTTOM OF DITCH.
3. TOPSOIL OBTAINED FROM BORROW PITS OR OTHER SOURCES MAY BE USED IN LIEU OF EXCAVATED TURF AND TOPSOIL WHEN ECONOMICALLY FEASIBLE. NO ADDITIONAL PAYMENT WILL BE MADE FOR SUBSTITUTING TOPSOIL FOR EXCAVATED TURF OR TOPSOIL.

TOPSOIL: IF THE QUANTITY OF EXISTING STORED OR EXCAVATED TOPSOIL IS INADEQUATE FOR PLANTING, SUFFICIENT ADDITIONAL TOPSOIL SHALL BE FURNISHED. TOPSOIL FURNISHED SHALL BE A NATURAL, FERTILE, FRIABLE SOIL, POSSESSING CHARACTERISTICS OF REPRESENTATIVE PRODUCTIVE SOILS IN THE VICINITY. IT SHALL BE OBTAINED FROM NATURALLY WELL–DRAINED AREAS.

TOPSOIL SHALL BE WITHOUT ADMIXTURE OF SUBSOIL AND FREE FROM JOHNSON GRASS (SORGHUM HALEPENSE), NUT GRASS (CYPERUS ROTUNDUS) AND OBJECTIONABLE WEEDS AND TOXIC SUBSTANCES.

GROUND LIMESTONE (DOLOMITE) CONTAINING NOT LESS THAN 85 PERCENT OF TOTAL CARBONATES, AND SHALL BE GROUND TO SUCH A FINENESS THAT 50 PERCENT WILL PASS A 100–MESH SIEVE AND 90 PERCENT WILL PASS A 20–MESH SIEVE.

16–16–16 FORMULATION OF WHICH 60 PERCENT OF THE NITROGEN IS IN THE UREA–FORMALDEHYDE FORM AND SHALL CONFORM TO THE APPLICABLE STATE FERTILIZER LAWS. IT SHALL BE GRANULATED SO THAT 80 PERCENT IS HELD ON A 16–MESH SCREEN, UNIFORM IN COMPOSITION, DRY AND FREE–FLOWING. MULCH: CLEAN HAY OR FREE STRAW MULCH.

AREAS TO BE GRASSED SHALL BE GRADED TO REMOVE DEPRESSIONS, UNDULATIONS, AND IRREGULARITIES IN THE SURFACE BEFORE GRASSING.

PLACING TOPSOIL: AREAS TO BE GRASSED SHALL HAVE A MINIMUM TOPSOIL OVER OF TWO INCHES. TOPSOIL SHALL NOT BE PLACED WHEN THE SUBGRADE IS EXCESSIVELY WET, EXTREMELY DRY OR IN A CONDITION OTHERWISE DETRIMENTAL TO THE PROPOSED PLANTING OR PROPER GRADING

TILLAGE: THE AREA TO BE GRASSED SHALL BE THOROUGHLY TILLED TO A DEPTH OF FOUR INCHES USING A PLOW AND DISC HARROW OR ROTARY TILLING MACHINERY UNTIL A SUITABLE BED HAS BEEN PREPARED AND NO CLODS OR CLUMPS REMAIN LARGER THAN 1–1/2 INCHES IN DIAMETER.

APPLICATION OF LIME: THE PH OF THE SOIL SHALL BE DETERMINED. IF THE PH IS BELOW 5.0, SUFFICIENT LIME SHALL BE ADDED TO PROVIDE A PH BETWEEN 5.5 AND 6.5. THE LIME SHALL BE THOROUGHLY INCORPORATED INTO THE TOP THREE TO FOUR INCHES OF THE SOIL. LIME AND FERTILIZER MAY BE APPLIED IN ONE OPERATION.

APPLICATION OF FERTILIZER: FERTILIZER SHALL BE APPLIED AT THE RATE OF 6 POUNDS PER 1,000 SQUARE FEET AND SHALL BE THOROUGHLY INCORPORATED INTO THE TOP THREE TO FOUR INCHES OF SOIL.

ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE SEEDED AS SPECIFIED HEREIN. IMMEDIATELY BEFORE SEEDS ARE SOWN AND AFTER FERTILIZER AND LIME ARE APPLIED, THE GROUND SHALL BE CARRIED AS NECESSARY AND SHALL BE RAKED UNTIL HE SURFACE IS SMOOTH, FRIABLE, AND OF UNIFORMLY FINE TEXTURE. AREAS TO BE GRASSED SHALL BE SEEDED EVENLY WITH A MECHANICAL SPREADER, RAKED LIGHTLY, ROLLED WITH A 200–POUND ROLLER, AND WATERED WITH A FINE SPRAY.

SEEDS SHALL BE APPLIED AT THE FOLLOWING RATE:

SEEDS RATE OF APPLICATION

BERMUDA 6 LBS./1000 SQ.FT.

SEEDED AREAS SHALL BE MULCHED AT THE RATE OF NOT LESS THAN 1–1/2" LOOSE MEASUREMENT OVER ALL SEEDED AREAS. SPREAD BY HAND, BLOWER, OR OTHER SUITABLE EQUIPMENT. MULCH SHALL BE CUT INTO THE SOIL WITH EQUIPMENT CAPABLE OF CUTTING THE MULCH UNIFORMLY INTO THE SOIL. MULCHING SHALL BE DONE WITHIN 24 OURS OF THE TIME SEEDING IS COMPLETED.

AFTER SEEDING AND MULCHING, A CULTIPACKER, TRAFFIC ROLLER, OR OTHER SUITABLE EQUIPMENT SHALL BE USED FOR ROLLING THE GRASSED AREAS. AREAS SHALL THEN BE WATERED WITHIN A FINE SPRAY.

ALL AREAS TO BE GRASSED SHALL BE PROTECTED AGAINST EROSION AT ALL TIMES. FOR PROTECTION DURING WINTER MONTHS (NOVEMBER 1ST THRU MARCH 31ST) ITALIAN RYE GRASS SHALL BE PLANTED AT A RATE OF FOUR POUNDS PER 1,000 SQUARE FEET ON ALL AREAS WHICH ARE NOT PROTECTED BY PERMANENT GRASS.

SEEDING DETAIL

NOT TO SCALE

PERMIT PURPOSES ONLY

CONSTRUCTION DETAILS
NORTH BAY HAVEN SYNTHETIC TURF
NORTH BAY HAVEN
LYNN HAVEN, FLORIDA

SCALE: SHOWN
DESIGNED BY: JFP
DRAWN BY: JFP
REVIEWED BY: SDM
ISSUE DATE: 11/18/2026
CF/D: 240.182G02
NOT RELEASED FOR CONSTRUCTION BY: DATE:

McNEIL–CARROLL ENGINEERING, INC.
Professional Engineering Consultants
STATE OF FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER: 7288
475 Harrison Avenue, Suite 200
Panama City, Florida 32401
Phone: 850–763–5730

NO.	DATE	BY	REVISIONS
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Sean D. McNeil, P.E.
PROFESSIONAL ENGINEER
FL LC # 49303

Robert L. Carroll, P.E.
PROFESSIONAL ENGINEER
FL LC # 57988

11/18/26

SHEET NUMBER 5 OF 7

240.182 – NORTH BAY HAVEN SYNTHETIC TURF

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SITE DRAINAGE

ALL OFF-SITE AND ON-SITE WORK INCLUDED CONSISTS OF BUT IS NOT LIMITED TO THE FOLLOWING:

EXCAVATION, BEDDING, FILTER MATERIAL AND BACKFILL FOR ALL STORM SEWER, SUBSURFACE DRAINS AND DRAINAGE STRUCTURES.

COMPLETE INSTALLATION OF ALL STORM SEWER, SUBSURFACE DRAINS, CATCH BASINS, JUNCTION BOXES, MANHOLES, ETC., INCLUDING ALL RELATED FITTINGS, JOINTS COVERS, GRATES, FRAMES, RUNGS, ETC.

ANY WORK WITHIN STREET OR HIGHWAY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE GOVERNMENTAL AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL OF THESE GOVERNING AUTHORITIES HAVE BEEN NOTIFIED.

POLYVINYL CHLORIDE (PVC), FOR PIPE UP TO AND INCLUDING TEN INCHES (10") IN DIAMETER, SHALL CONFORM TO ASTM D3034 SDR 35 WITH ELASTOMERIC GASKET JOINTS CONFORMING TO ASTM D3212.

REINFORCED CONCRETE PIPE, FOR PIPE TWELVE INCHES (12") IN DIAMETER AND UP, SHALL CONFORM TO ASTM C-76, CLASS IV OR AASHTO M-170 WITH BELL AND SPIGOT OR TONGUE AND GROOVE COMPRESSION JOINT CONFORMING TO ASTM C-443.

MANHOLES, CATCH BASINS, ETC. SHALL BE SIZE AND TYPE INDICATED ON THE DRAWINGS AND SHALL BE CONSTRUCTED OF THE FOLLOWING:

REINFORCED PRECAST CONCRETE MANHOLE SECTIONS INCLUDING CONCENTRIC OR ECCENTRIC CONES AND GRADE RINGS SHALL BE 4000 PSI CONCRETE AND CONFORM TO ASTM C478 OR AASHTO M-199. SECTIONS SHALL BE COMPLETE WITH 3/4" ROUND CAST IN PLACE WROUGHT IRON STEPS.

BRICK SHALL BE SOUND, HARD BURNED THROUGHOUT AND OF UNIFORM SIZE AND QUALITY AND SHALL BE IN ACCORDANCE WITH ASTM C-32, GRADE MS OR MM.

CONCRETE MASONRY SHALL BE SOLID PRECAST SEGMENTAL CONCRETE MASONRY UNITS CONFORMING TO ASTM C-139.

IRON CASTINGS SHALL CONFORM TO ASTM A-48, CLASS 30. BEARING SURFACES BETWEEN CAST IRON FRAMES, COVERS AND GRATES SHALL BE MACHINED, FITTED TOGETHER AND MATCH MARKED TO PREVENT ROCKING.

SYSTEM IDENTIFYING LETTER 2" HIGH SHALL BE STAMPED OR CAST INTO ALL COVERS SO THAT THE MAY BE PLAINLY VISIBLE.

CASTINGS SHALL BE MANUFACTURED BY EAST JORDAN IRON WORKS, INC. NEENAH FOUNDRY COMPANY, VULCAN FOUNDRY COMPANY OR EQUAL.

MANHOLE STEPS FOR BRICK OR CONCRETE MASONRY STRUCTURES SHALL BE CAST IRON ASPHALT COATED, NEENAH FOUNDRY COMPANY "R-1980-I" OR EQUAL.

CONCRETE AND MASONRY MATERIALS FOR CONSTRUCTION OF STORM DRAINAGE STRUCTURES SHALL CONSIST OF THE FOLLOWING:

PORTLAND CEMENT SHALL BE STANDARD BRAND OF PORTLAND CEMENT CONFORMING TO ASTM C-150, TYPE I OR II.

FINE AND COARSE AGGREGATES FOR CONCRETE SHALL BE PER ASTM C-33. AGGREGATES SHALL BE WELL GRADED FROM FINE TO COARSE WITHIN LIMITS SPECIFIED IN ASTM C-33. MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE 3/4".

AGGREGATE FOR CEMENT MORTAR SHALL BE CLEAN, SHARP SAND CONFORMING TO ASTM C-144. GRADE SAND FROM COARSE TO FINE WITH 100% PASSING NO. 8 SIEVE, AND NOT OVER 10 TO 30% PASSING NO. 50 SIEVE. HYDRATED LIME SHALL COMPLY WITH ASTM C-207, TYPE S. WATER SHALL BE CLEAN AND FREE FROM DELETERIOUS MATERIALS.

ALL MATERIAL USED FOR CONCRETE AND THE DESIGN OF ALL CONCRETE MIXES SHALL CONFORM WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI 211.1-81).

ALL CONCRETE, UNLESS NOTED OTHERWISE, SHALL DEVELOP A 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.

JOINT SEALANT SHALL BE HOT LAID BITUMINOUS SEALER.

RIP RAP SHALL BE SOUND, TOUGH DURABLE ROCK OR BROKEN CONCRETE AS APPROVED BY THE GEOTECHNICAL ENGINEER. RIP RAP SHALL BE AT LEAST EIGHT INCH (8") IN ONE DIMENSION AN SHALL HAVE A VOLUME OF NOT LESS THAN 1/3 CUBIC FOOT. SMALLER PIECES PERMITTED FOR FILLING VOIDS.

REINFORCING STEEL FOR CONCRETE SHALL BE INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 40. WELDED WIRE MESH SHALL CONFORM TO ASTM DESIGNATION A185 FOR SMOOTH WIRE AND ASTM A497 FOR DEFORMED WIRE.

FORMS FOR FOUNDATIONS AND OTHER CONCRETE WORK SHALL BE WOOD. FORMS SHALL BE OF SUFFICIENT STRENGTH TO PREVENT DEFORMATION UNDER LOAD AND TIGHT ENOUGH TO PREVENT LEAKAGE. FOUNDATIONS MAY BE POURED AGAINST EARTH WHERE CONDITIONS PERMIT.

ALL REINFORCEMENT SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH ACI 318-77. WELDED WIRE MESH SHALL BE LAPPED 6-INCHES AT ALL EDGES.

THE MIXING, PLACING, CURING AND FINISHING OF CONCRETE SHALL COMPLY WITH ACI 304 AND ACI 318. ALL EXPOSED SURFACES SHALL BE GIVEN A HARD STEEL TROWEL FINISH WITH NO TROWEL MARKS REMAINING. NO CEMENT SHALL BE DUSTED ON THE SURFACE. ALL CONCRETE SHALL BE CURED BY COATING WITH A CLEAR CURING NO CEMENT COMPOUND CONFORMING TO ASTM C-309, OR BY KEEPING IT WET FOR AT LEAST SIX DAYS AFTER POURING. AFTER THE FORMS ARE STRIPPED, ALL EXPOSED CONCRETE SURFACES SHALL BE POINTED AS NEEDED AND RUBBED TO A UNIFORM FINISH.

CONCRETE, UNLESS OTHERWISE NOTED, SHALL HAVE COMPRESSIVE STRENGTH AFTER 28 DAYS OF 3000 PSI MINIMUM. MIX SHALL BE SO PROPORTIONED TO PROVIDE A MINIMUM OF 517 POUNDS OF CEMENT PER CUBIC YARD.

CONCRETE FILL BELOW GRADE FOR PIPE CRADLES ETC. MAY BE 2500 PSI AT 28 DAYS.

CONCRETE, WHERE EXPOSED TO THE WEATHER, SHALL BE AIR ENTRAINED. AIR ENTRAINMENT SHALL BE ACCOMPLISHED BY THE USE OF ADDITIVES CONFORMING TO ASTM C-260. AIR CONTENT SHALL BE 6% + 1%. ADDITIVE SHALL BE USED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S PRINTED DIRECTIONS.

READY-MIX CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-94.

CEMENT MORTAR SHALL BE AS SPECIFIED HEREINAFTER. USE METHODS OF MIXING MORTAR MATERIALS CAN BE CONTROLLED AND ACCURATELY MAINTAINED DURING WORK PROGRESS. MORTAR SHALL NOT BE MIXED IN GREATER QUANTITIES THAN SATISFACTORY WORKABILITY. RETEMPERING OF MORTAR IS NOT PERMITTED.

MORTAR FOR LAYING BRICK OR CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C-270, TYPE M, AVERAGE COMPRESSIVE STRENGTH 2500 AT 28 DAYS. MORTAR MIX SHALL BE PROPORTIONED BY VOLUME. MORTAR FOR PARGING SHALL CONSISTS OF ONE PART PORTLAND CEMENT AND TWO PARTS SAND.

MORTAR FOR GROUTING OF RIP RAP SHALL CONSIST OF ONE PART PORTLAND CEMENT AND THREE PARTS SAND.

STORM WATER SEWERS: STORM SEWERS SHALL BE INSTALLED IN LOCATIONS AND OF SIZES INDICATED ON DRAWING.

LAY PIPE, EMBED IT FIRMLY TO REQUIRED LINE AND GRADE WITH BELLS OF GROOVE END UP-GRADE. FIT ENDS TOGETHER, EXCAVATE BELL HOLES SO THAT SEWER WILL HAVE SMOOTH AND UNIFORM INVERT THROUGHOUT ITS LENGTH.

CORRUGATED METAL PIPE SHALL BE PLACED ON A FLAT BOTTOM TRENCH WITH HAUNCHES SOLIDLY SUPPORTED BY TAMPED BEDDING MATERIAL.

WHERE GROUND IS FOUND UNSUITABLE TO SUPPORT PIPE, PROVIDE CONCRETE CRADLES. DEPOSIT CONCRETE FULL WIDTH OF TRENCH 4" DEEP MINIMUM TO BOTTOM OF PIPE, REINFORCE CONTINUOUSLY WITH TWO (2) NO. 4 REINFORCING BARS. BEFORE CONCRETE IS SET, EMBED PIPE EVENLY, DEPOSIT REMAINDER OF CONCRETE TO CENTERLINE OF PIPE AND TAMP IN A MANNER TO AVOID DISTURBING PIPE.

WHERE STORM SEWER CROSSES A SANITARY SEWER OR WATER LINE AND THE STORM SEWER IS WITHIN ONE AND A HALF (1-1/2) FEET OF THE SANITARY SEWER PIPE OR WATER LINE, THE INTERSECTION OF THE PIPE OR LINE SHALL BE EMBEDDED IN CONCRETE FOR A DISTANCE OF FIVE FEET (5') EACH WAY FROM CENTERLINE OF INTERSECTION.

PROVIDE POURED CONCRETE FOUNDATIONS FOR DRAINAGE STRUCTURES.

PRECAST CONCRETE BASE MAY BE USED WHERE APPROVED BY THE GEO-TECHNICAL ENGINEER. PRECAST CONCRETE BASE MUST BE SET LEVEL ON SAND CUSHION OF NOT LESS THAN 2" NOR MORE THAN 4".

MANHOLES AND CATCH BASINS SHALL BE CONSTRUCTED OF BRICK, CONCRETE MASONRY OR PRECAST CONCRETE WITH CAST IRON FRAMES, COVERS AND MANHOLE STEPS, AS INDICATED ON DRAWINGS AND SPECIFIED HEREIN.

RIP RAP SHALL BE LAID OVER FILTER FABRIC FROM THE BOTTOM UPWARD, STONES SHALL BE LAID BY HAND WITH EIGHT (8") INCH MINIMUM DIMENSION PERPENDICULAR TO GRADE WITH WELL BROKEN JOINTS, COMPACTED AS IT GOES, TRUE TO LINE. ALL JOINTS SHALL BE FILLED WITH CEMENT MORTAR SURFACE OF STONE TO BE EXPOSED. CLEAN JOINTS WITH SIRE BRUSH.

BEFORE BACKFILLING AROUND DRAINAGE STRUCTURES, ALL FORMS, TRASH AND DEBRIS SHALL BE REMOVED AND CLEARED AWAY. SELECTED EXCAVATED MATERIAL SHALL BE PLACED SYMMETRICALLY ON ALL SIDES IN EIGHT INCH (8") MAXIMUM LAYERS; EACH LAYER SHALL BE MOISTENED AND COMPACTED WITH MECHANICAL OR HAND TAMPERS.

INFILTRATION OF THE STORM DRAINAGE SYSTEM SHALL NOT EXCEED 0.60 GALLONS PER INCH OF INTERNAL PIPE DIAMETER PER ONE HUNDRED FEET (100') OF PIPELINE PER HOUR WITH A MAXIMUM HYDROSTATIC HEAD AT THE CENTER LINE OF THE PIPE OF TWENTY FIVE FEET (25'), OR AS REQUIRED BY GOVERNING CODE AUTHORITIES.

CATCH BASIN FRAMES AND GRATINGS: ASPHALT COATED GRAY CAST IRON, ANSI/ASTM A 48, CLASS 30 B.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUPPLY ALL MATERIALS NECESSARY TO COMPLETE DRAINAGE.

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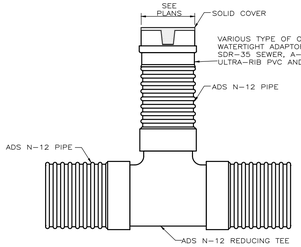
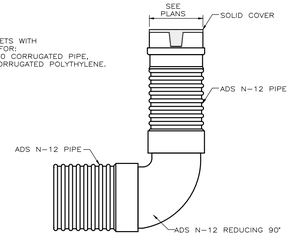
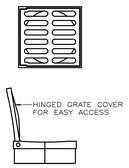




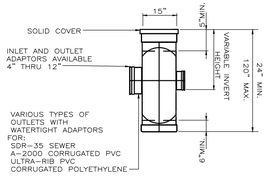
GRATE HAS H-20 (HEAVY TRAFFIC) DOT RATING
QUALITY: MATERIAL SHALL CONFORM TO ASTM A48 - CLASS 30B
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT



GRATE

NOTE: USE ADS CATCH BASIN OR EQUAL. SEE PLANS FOR SIZES

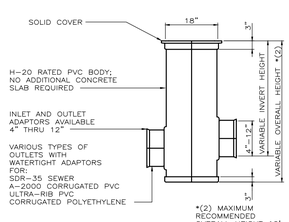
ADS INLINE DRAIN
NOT TO SCALE



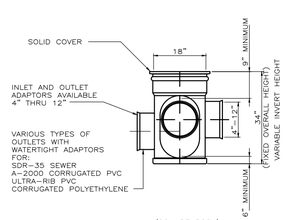
SECTION

NOTE: USE ADS CATCH BASIN OR EQUAL.

15" ADS CATCH BASIN DETAIL
NOT TO SCALE



SECTION

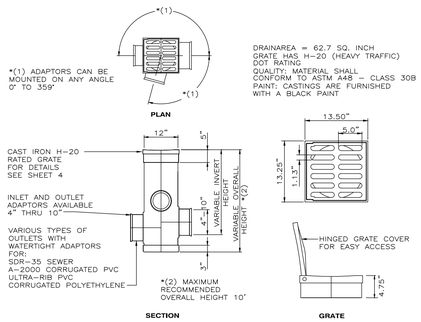


(SQUARE BODY)

SECTION

NOTE: USE ADS CATCH BASIN OR EQUAL.

18" ADS CATCH BASIN DETAIL
NOT TO SCALE



SECTION **GRATE**

NOTE: USE ADS CATCH BASIN OR EQUAL.

12" ADS CATCH BASIN DETAIL
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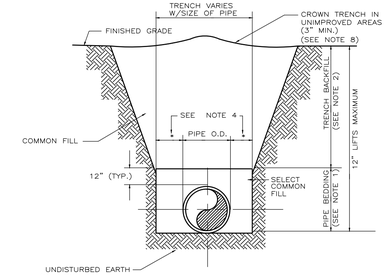

NOTES:
1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% (6" LIFTS) OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE CITY.
4. (*): 1.5" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW
7. REFER TO SECTION 32.5 OF THE MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN CITY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

TRENCHES AND EXCAVATION PITS SHALL NOT BE BACKFILLED UNTIL ALL TESTS AND INSPECTIONS COVERING THE INSTALLATION OF THE STORM DRAINAGE SYSTEM HAVE BEEN PERFORMED AND APPROVED.

ALL TIMBER SHEETING BELOW A PLANE ONE FOOT ABOVE TOP OF PIPE SHALL REMAIN IN PLACE IN ORDER NOT TO DISTURB PIPE GRADING. BEFORE BACKFILLING, REMOVE ALL OTHER SHEETING, BRACING AND SHORING. PIPE TO BE CAREFULLY COMPACTED TO NINETY FIVE PERCENT (95%) OF MAXIMUM DENSITY AS PER ASTM D-1557 UNTIL ONE FOOT (1') OF COVER EXISTS OVER PIPE.

IN STREETS, DRIVES, PARKING LOTS AND OTHER AREAS TO HAVE OR HAVING IMPROVED HARD SURFACES, BACKFILL SHALL BE MATERIAL SPECIFIED AS FOR PIPE BEDDING AND SHALL BE DEPOSITED IN SIX INCH (6") LOOSE LAYERS AS OPTIMUM MOISTURE CONTENT (+ 2%) AND COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 WHERE SERVICES OR UTILITY LINES CROSS STREET, BEDDING SHALL BE CARRIED TO FIVE FEET (5') BEHIND THE CURB, OR WHERE SIDEWALKS EXISTS, TO THE SIDE OF SIDEWALK FARTHEST AWAY FROM THE STREET.

MATERIAL USED FOR BEDDING SHALL MEET CURRENT RECOMMENDATIONS OF THE PIPE MANUFACTURER AND SHALL BE APPROVED BY THE ENGINEER. THE SPECIFIED COHESIONLESS MATERIAL SHALL BE PLACED IN THE TRENCH SIMULTANEOUSLY ON EACH SIDE OF THE PIPE TO THE FULL WIDTH OF THE TRENCH. MATERIAL WILL BE PLACED IN A MAXIMUM LIFT OF SIX (6) INCHES (COMPACTED DEPTH) TO A MINIMUM DEPTH OF ONE (1) FOOT ABOVE THE CROWN OF THE PIPE.

PERFORM ALL TRENCHING REQUIRED FOR THE INSTALLATION OF UTILITIES AS SHOWN ON PLANS AND SPECIFIED HEREIN. MAKE ALL TRENCHES OPEN VERTICAL CONSTRUCTION WITH SUFFICIENT WIDTH TO PROVIDE FREE WORKING SPACE AT BOTH SIDE OF THE TRENCH AND AROUND THE INSTALLED ITEMS AS REQUIRED FOR CAULKING, JOINING, BACKFILLING AND COMPACTING.

PROPERLY SUPPORT ALL TRENCHES IN STRICT ACCORDANCE WITH ALL PERTINENT RULES AND REGULATIONS.

GRADE THE TRENCH BOTTOM TO PROVIDE A SMOOTH, FIRM AND STABLE FOUNDATION FREE OF ROCK POINTS THROUGHOUT THE LENGTH OF THE PIPE. IN AREAS WHERE SOFT, UNSTABLE MATERIALS ARE ENCOUNTERED AT THE SURFACE UPON WHICH COHESIONLESS MATERIAL IS TO BE PLACED, REMOVE THE UNSTABLE MATERIAL AND REPLACE IT WITH MATERIAL APPROVED BY THE ENGINEER, MAKE SUFFICIENT DEPTH TO DEVELOP A FIRM FOUNDATION FOR THE ITEM BEING INSTALLED.

AT EACH JOINT IN PIPE, RECESS THE BOTTOM OF THE TRENCH AS REQUIRED INTO THE FIRM FOUNDATION IN SUCH A MANNER AS TO RELIEVE THE BELL OF THE PIPE OF ALL LOAD AND TO ENSURE CONTINUOUS BEARING OF THE PIPE BARREL ON THE FIRM FOUNDATION.

ACCURATELY SHAPE ALL PIPE SUBGRADE AND FIT THE BOTTOM OF THE TRENCH TO THE PIPE SHAPE; USE A DRAG TEMPLATE SHAPED TO CONFORM TO THE OUTER SURFACE OF THE PIPE IF OTHER METHODS DO NOT PRODUCE SATISFACTORY RESULTS. SHAPING WILL CONFORM TO THE OUTSIDE OF THE PIPE FOR A DEPTH OF NOT LESS THAN 10% OF THE TOTAL HEIGHT (OUTSIDE DIMENSION) OF THE PIPE.

PIPE TRENCHES SHALL BE EXCAVATED TO A DEPTH THAT WILL INSURE A MINIMUM OF THIRTY INCHES OF COVER LESS OTHERWISE SHOWN ON THE DRAWINGS OR DIRECTED.

BACKFILL OF EARTH AROUND MANHOLES SHALL BE FILLED WITH THOROUGHLY COMPACTED SAND OR GRAVEL AT THE EXPENSE OF THE CONTRACTOR.

TRENCHES SHALL BE BACKFILLED WITH EXCAVATED MATERIALS, FREE FROM LARGE CLODS OR STONES. BACKFILL SHALL BE DEPOSITED IN LAYERS NOT TO EXCEED 6-INCHES (6") IN THICKNESS, MOISTENED, AND COMPACTED TO DENSITY EQUAL TO OR GREATER THAN 95% OF THE MAXIMUM DENSITY OF AASHTO STANDARD METHOD T-99 , TO A MINIMUM DEPTH OF 12-INCHES OVER THE PIPE. THE REMAINDER OF THE BACKFILL SHALL BE PLACED IN 8-INCH LAYERS COMPACTED TO 95% MAXIMUM DENSITY UNLESS THE BACKFILL IS BENEATH PAVED OR BUILDING AREAS IN WHICH CASE IT SHALL BE COMPACTED TO 95% OF A MODIFIED PROCTOR.

EXCAVATIONS FOR PIPE LAYING OPERATIONS SHALL BE CONSTRUCTED IN A MANNER TO CAUSE THE LEAST INTERRUPTION TO TRAFFIC. WHEN TRAFFIC MUST CROSS OPEN TRENCHES THE CONTRACTOR SHALL PROVIDE SUITABLE BRIDGES.

TYPE B BEDDING AND TRENCHING DETAIL
NOT TO SCALE

PERMIT PURPOSES ONLY

CONSTRUCTION DETAILS
NORTH BAY HAVEN SYNTHETIC TURF
NORTH BAY HAVEN
LYNN HAVEN, FLORIDA

SCALE:	SHOWN
DESIGNED BY:	JFP
DRAWN BY:	JFP
REVIEWED BY:	SDM
ISSUE DATE:	11/18/2026
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FL LIC # 49303

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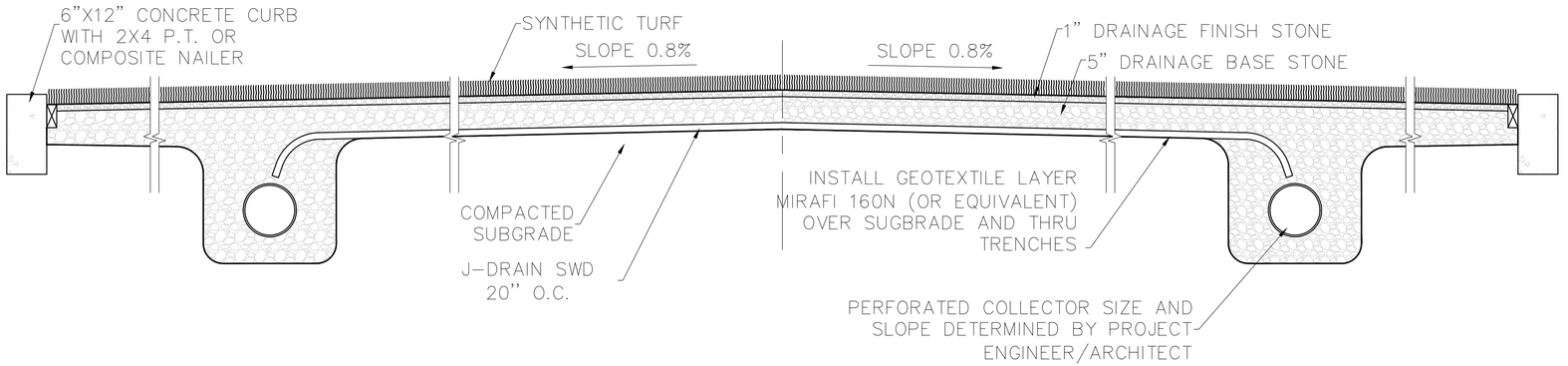
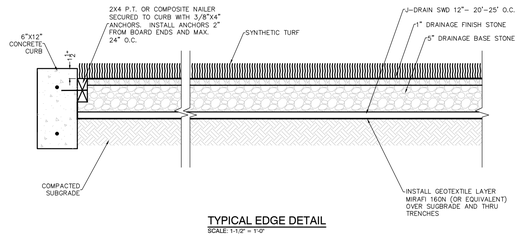
SHEET NUMBER 6 OF 7

240.182 - NORTH BAY HAVEN SYNTHETIC TURF



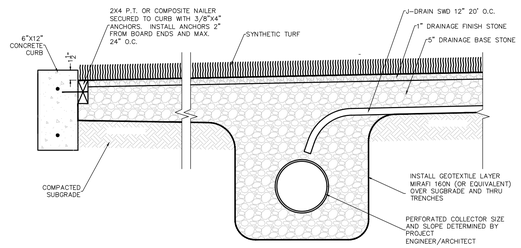
1 SECTION THRU FIELD

SCALE: 1/2" = 1'-0"



TYPICAL EDGE DETAIL

SCALE: 1-1/2" = 1'-0"



2 TYPICAL EDGE DETAIL

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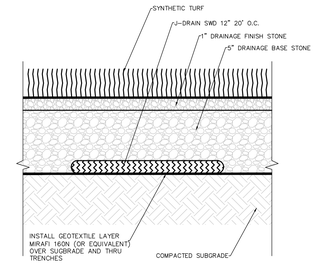
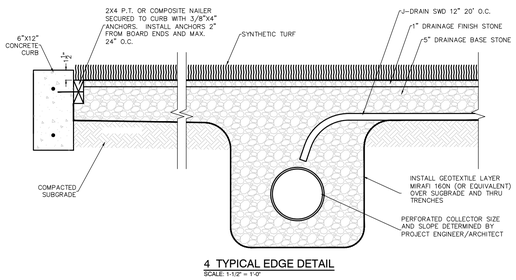


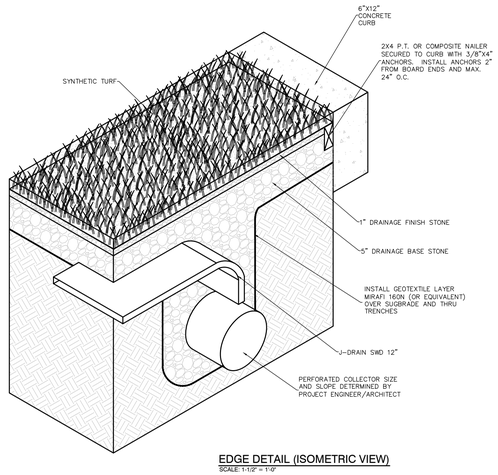
3 COMPOSITE DRAIN DETAIL

SCALE: 3" = 1'-0"



4 TYPICAL EDGE DETAIL

SCALE: 1-1/2" = 1'-0"



EDGE DETAIL (ISOMETRIC VIEW)

SCALE: 1-1/2" = 1'-0"

PERMIT PURPOSES ONLY

CONSTRUCTION DETAILS
NORTH BAY HAVEN SYNTHETIC TURF
NORTH BAY HAVEN

LYNN HAVEN, FLORIDA

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