ADDENDUM
NO. 2

January 11, 2023

NEW TAFT MIDDLE SCHOOL WATER MAIN EXTENSION PROJECT
Winfield IN 46307

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated December 21, 2022 by Torrenga Engineering. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Page ADD 1-1 and 28 Revised drawings issued by Torrenga Engineering.

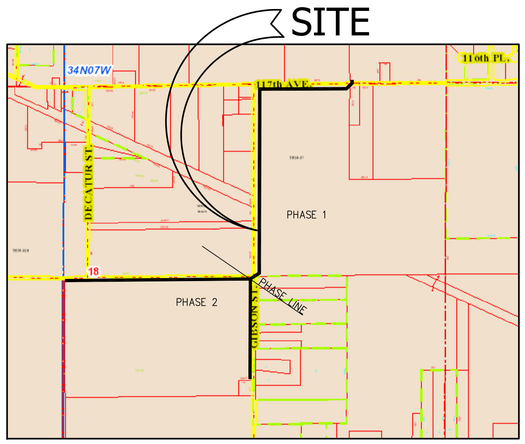
NEW MIDDLE SCHOOL

(ROBERT A. TAFT MIDDLE SCHOOL)

WATER MAIN PHASE 1 & PHASE 2 COMBINE SET

WINFIELD, LAKE COUNTY, INDIANA

INDEX



VICINITY MAP

NORTH

Indiana 811

Know what's **below.** **Call** before you dig.

"IT'S THE LAW"

CALL 2 WORKING DAYS BEFORE YOU DIG

811 or 1-800-382-5544

CALL TOLL FREE

PER INDIANA STATE LAW IC8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

County: LAKE

NW **Qtr., Sec.** 18 , **T.** 34 **N, R.** 07 **W.**

Township: WINFIELD

DATE AND REVISIONS:

NO.	DATE	DESCRIPTION	BY
5	12-21-2022	IAW APPROVED VERSION	DCT/EM/SP
4	12-07-2022	IAW REVIEW & RESUBMITTAL	DCT/EM/SP
3	10-10-2022	IAW REVIEW	DCT/EM/SP
2	10-27-2021	IAW REVIEW #1	DCT/EM
1	09-30-2021	IAW SUBMITTAL	DCT/EM

DRAWING SET PROGRESS:

- [x] ENGINEERING PLAN - FOR REVIEW / APPROVAL
- [ ] FINAL ENGINEERING - FOR CONSTRUCTION

DEVELOPER/CLIENT:
Crown Point Community School
Administrative Service Center
200 East North Street
Crown Point, Indiana 46307
Tel. No.: (219) 663-3371

PREPARED BY:
Torrenga Engineering, Inc.
907 Ridge Road
Munster, Indiana 46321
Tel. No.: (219) 836-8918

CERTIFIED BY: DONALD C. TORRENGA
P.E. # 19868

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

Donald C. Torrenga

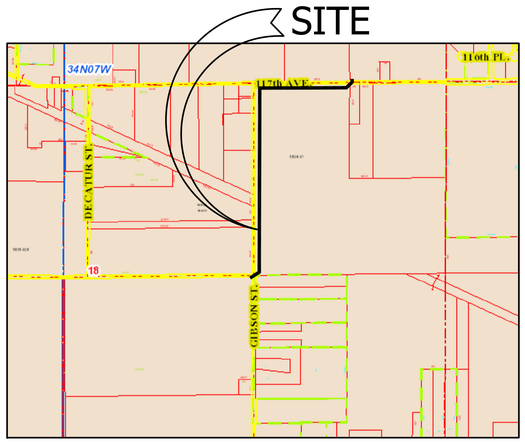
NEW MIDDLE SCHOOL

(ROBERT A. TAFT MIDDLE SCHOOL)

OFFSITE WATER MAIN

WINFIELD, LAKE COUNTY, INDIANA

INDEX	
PAGE	DESCRIPTION
COVER	TITLE PAGE
C-1.0	OVERALL PLAN
C-1.1 TO C-1.3	PLAN AND PROFILE
C-2.0	DETAILS & SPECIFICATIONS



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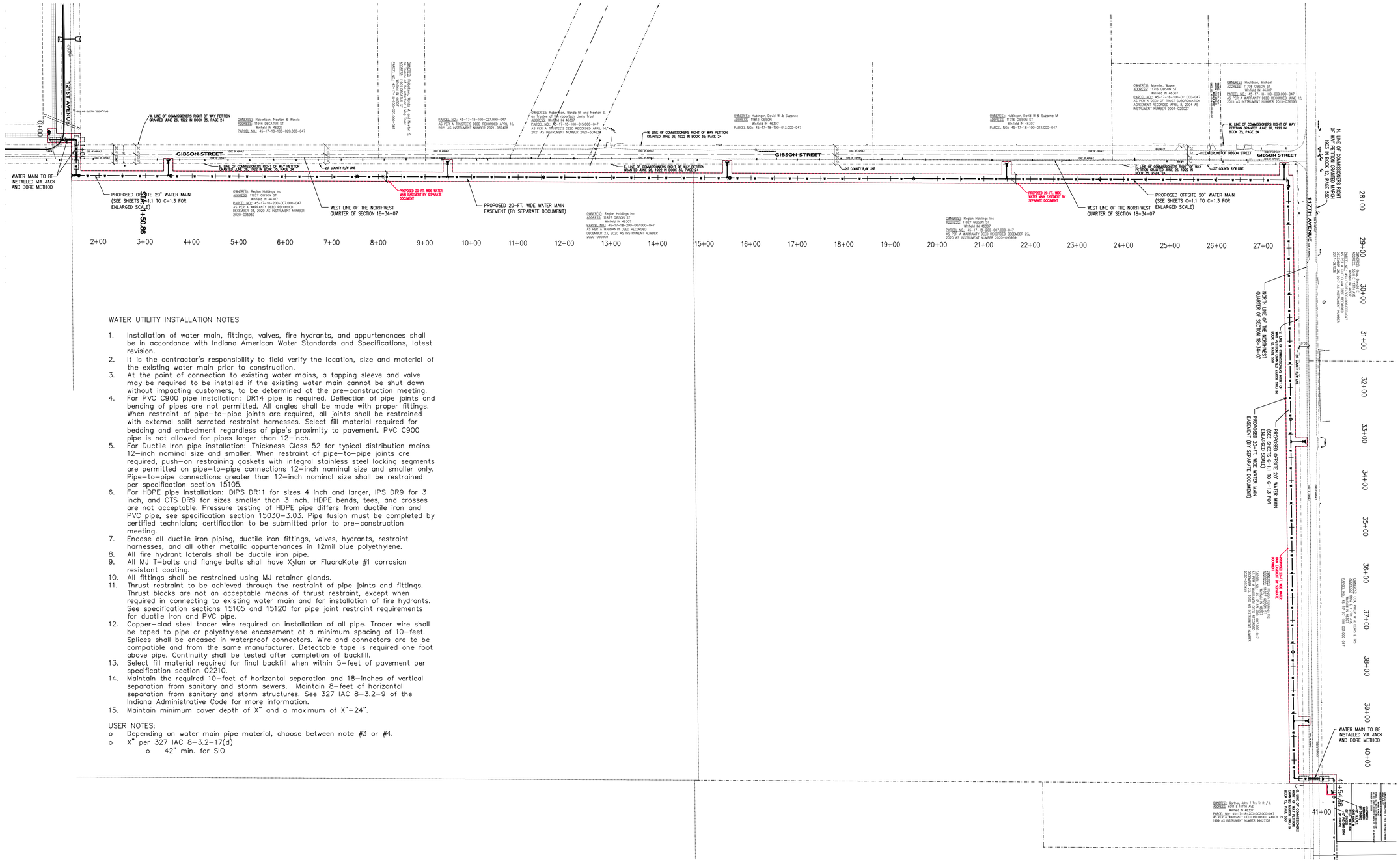

WATER UTILITY INSTALLATION NOTES

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5. For Ductile Iron pipe installation: Thickness Class 52 for typical distribution mains 12-inch nominal size and smaller. When restraint of pipe-to-pipe joints are required, push-on restraining gaskets with integral stainless steel locking segments are permitted on pipe-to-pipe connections 12-inch nominal size and smaller only. Pipe-to-pipe connections greater than 12-inch nominal size shall be restrained per specification section 15105.
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7. Encase all ductile iron piping, ductile iron fittings, valves, hydrants, restraint harnesses, and all other metallic appurtenances in 12mil blue polyethylene.
8. All fire hydrant laterals shall be ductile iron pipe.
9. All MJ T-bolts and flange bolts shall have Xylan or FluoroKote #1 corrosion resistant coating.
10. All fittings shall be restrained using MJ retainer glands.
11. Thrust restraint to be achieved through the restraint of pipe joints and fittings. Thrust blocks are not an acceptable means of thrust restraint, except when required in connecting to existing water main and for installation of fire hydrants. See specification sections 15105 and 15120 for pipe joint restraint requirements for ductile iron and PVC pipe.
12. Copper-clad steel tracer wire required on installation of all pipe. Tracer wire shall be taped to pipe or polyethylene encasement at a minimum spacing of 10-feet. Splices shall be encased in waterproof connectors. Wire and connectors are to be compatible and from the same manufacturer. Detectable tape is required one foot above pipe. Continuity shall be tested after completion of backfill.
13. Select fill material required for final backfill when within 5-feet of pavement per specification section 02210.
14. Maintain the required 10-feet of horizontal separation and 18-inches of vertical separation from sanitary and storm sewers. Maintain 8-feet of horizontal separation from sanitary and storm structures. See 327 IAC 8-3.2-9 of the Indiana Administrative Code for more information.
15. Maintain minimum cover depth of X" and a maximum of X"+24".

USER NOTES:
- o Depending on water main pipe material, choose between note #3 or #4.
- o X" per 327 IAC 8-3.2-17(d)
  - o 42" min. for SIO

NORTH

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8818 website: www.torrenga.com

NEW MIDDLE SCHOOL
WINDFIELD, LAKE COUNTY, INDIANA
OVERALL PLAN

12-21-2022
12-07-2022
10-10-2022
10-27-2021

REVISIONS:

DATE: 09-30-2021

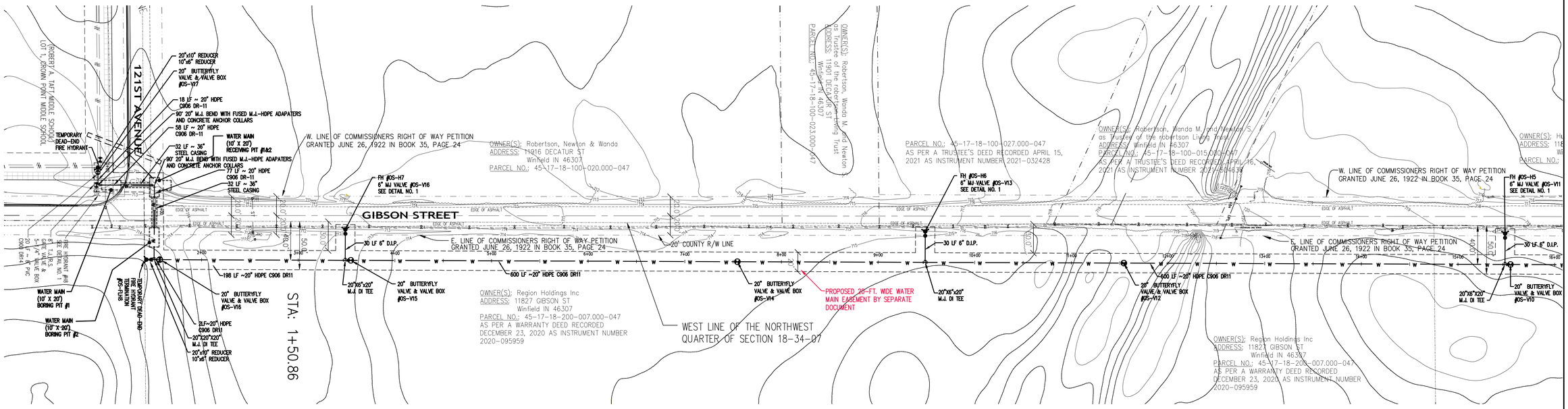
CLIENT:
Crown Point Community School
Administrative Service Center
200 East North Street
Crown Point, Indiana 46307

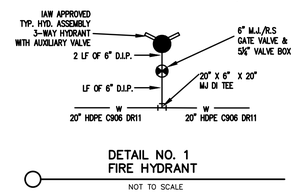
JOB NO: 2021-5010

SCALE: 1" = 100'

SHEET
C-1.0

FILE NO:Z:\2021-5010 Crown Point Middle School - Winfield\dwg\2021-5010 OFfsite WM.dwg 12/21/2022 12:34:30 PM CST





DETAIL NO. 1
FIRE HYDRANT
NOT TO SCALE

WATER UTILITY INSTALLATION NOTES

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3. At the point of connection to existing water mains, a tapping sleeve and valve may be required to be installed if the existing water main cannot be shut down without impacting customers, to be determined at the pre-construction meeting.
4. For PVC C900 pipe installation: DR14 pipe is required. Deflection of pipe joints and bending of pipes are not permitted. All angles shall be made with proper fittings. When restraint of pipe-to-pipe joints are required, all joints shall be restrained with external split serrated restraint harnesses. Select fill material required for bedding and embedment regardless of pipe's proximity to pavement. PVC C900 pipe is not allowed for pipes larger than 12-inch.
5. For Ductile Iron pipe installation: Thickness Class 52 for typical distribution mains 12-inch nominal size and smaller. When restraint of pipe-to-pipe joints are required, push-on restraining gaskets with integral stainless steel locking segments are permitted on pipe-to-pipe connections 12-inch nominal size and smaller only. Pipe-to-pipe connections greater than 12-inch nominal size shall be restrained per specification section 15105.
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9. All MJ T-bolts and flange bolts shall have Xylan or FluoroKote #1 corrosion resistant coating.
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USER NOTES:
- o Depending on water main pipe material, choose between note #3 or #4.
- o X" per 327 IAC 8-3.2-17(d)
  - o 42" min. for SIO

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SCALE:
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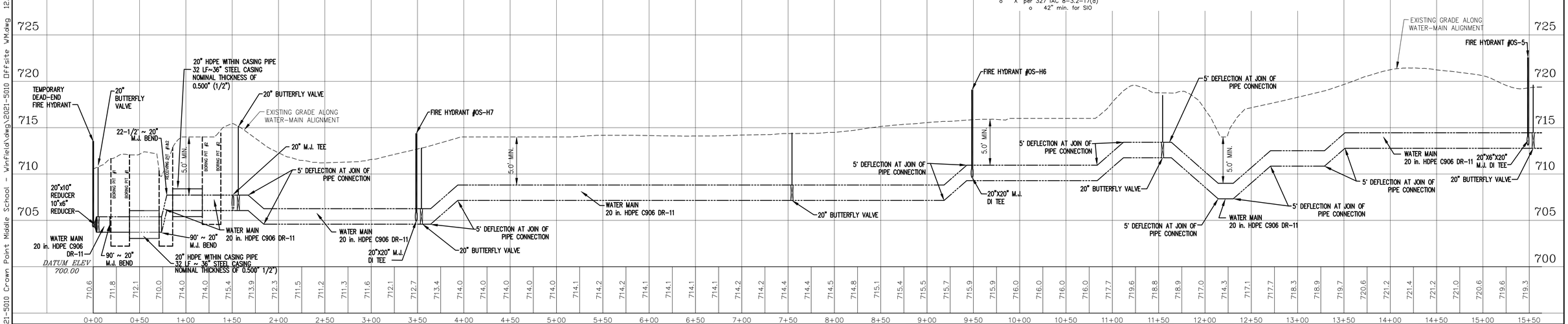
DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER



NEW SCHOOL – CROWN POINT COMMUNITY SCHOOL CORPORATION
OFFSITE WATER MAIN

DATE: 09-30-2021
REVISED: 10-27-2021 12-21-2022
10-10-2022
12-07-2022

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321

JOB NO.: 2021-5010
SHEET C-1.1

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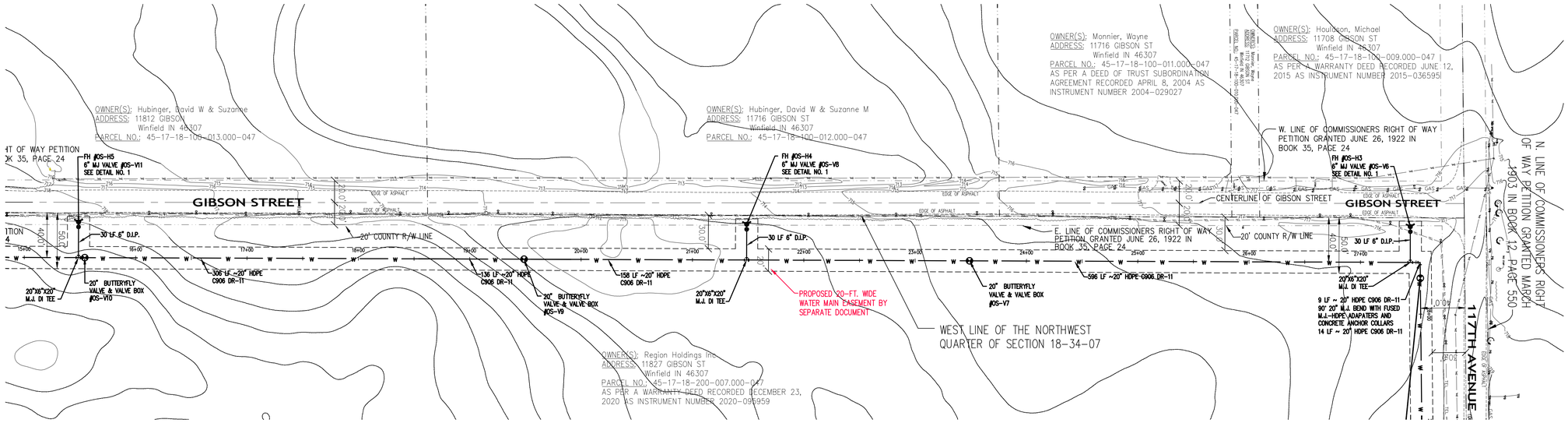

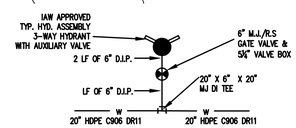

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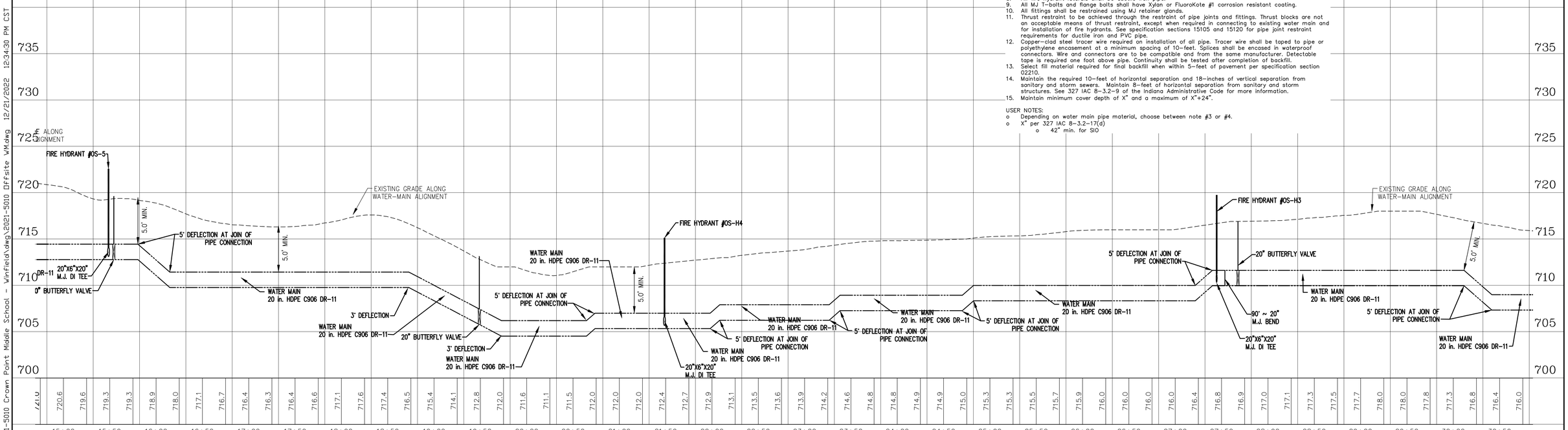

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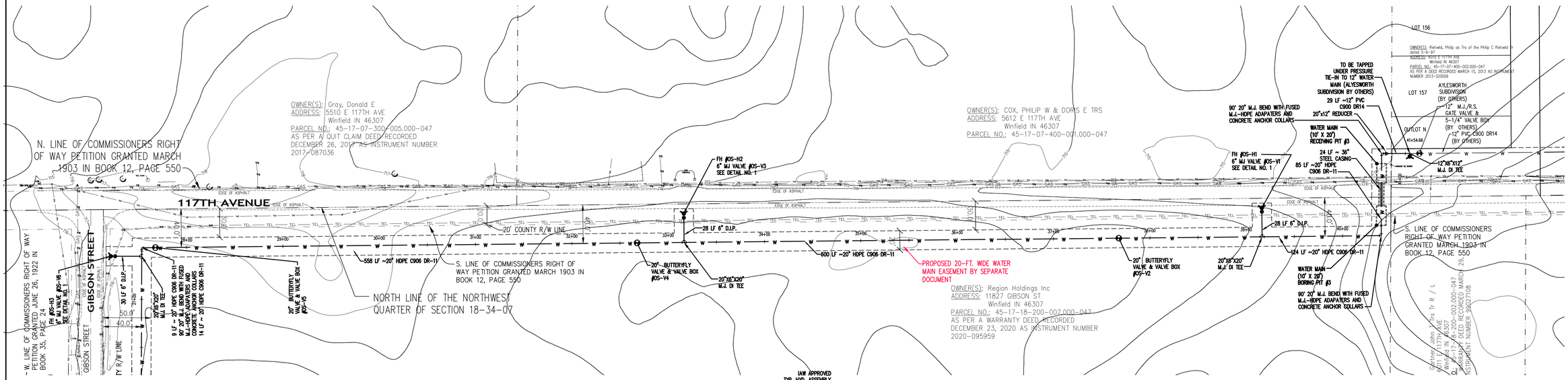

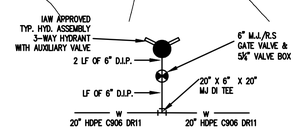

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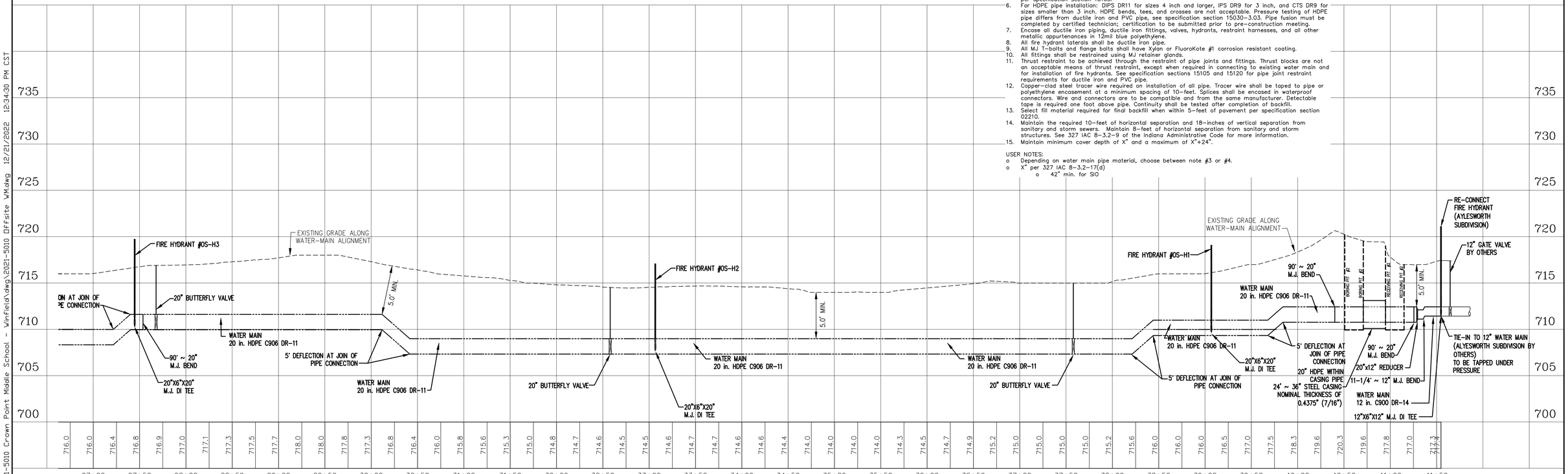
DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER



NEW SCHOOL – CROWN POINT COMMUNITY SCHOOL CORPORATION
OFFSITE WATER MAIN

DATE: 09-30-2021
REVISED: 10-27-2021
10-10-2022
12-07-2022
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TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321

JOB NO.: 2021-5010
SHEET C-1.3

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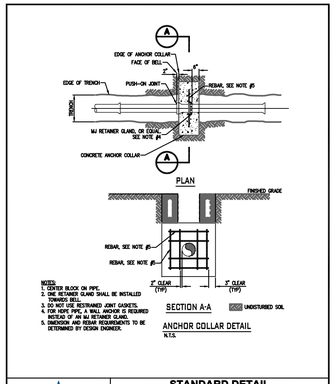
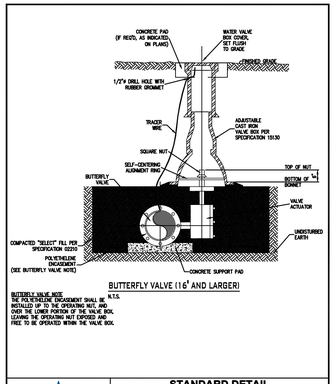


ANCHOR COLLAR DETAIL
N.T.S.

INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
153 N. EMERSON AVENUE
GREENWOOD, INDIANA 46143

STANDARD DETAIL
ANCHOR COLLAR DETAIL

DATE: JANUARY, 2018	DRAWN BY: S. FORD
LATEST REV: JANUARY, 2018	APP'D BY: E.N.

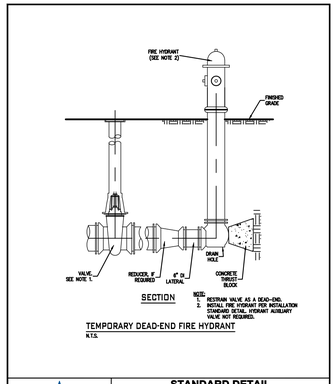


BUTTERFLY VALVE (16" AND LARGER)
N.T.S.

INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
153 N. EMERSON AVENUE
GREENWOOD, INDIANA 46143

STANDARD DETAIL
BUTTERFLY VALVE (16" AND LARGER)

DATE: JANUARY, 2018	DRAWN BY: S. FORD
LATEST REV: JANUARY, 2018	APP'D BY: E.N.

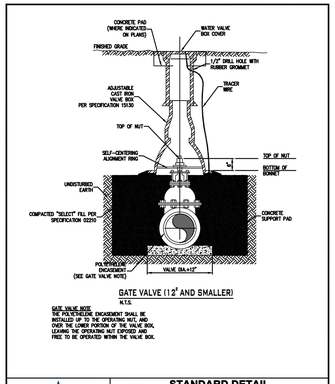


TEMPORARY DEAD-END FIRE HYDRANT
N.T.S.

INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
153 N. EMERSON AVENUE
GREENWOOD, INDIANA 46143

STANDARD DETAIL
TEMPORARY DEAD-END FIRE HYDRANT DETAIL

DATE: JANUARY, 2018	DRAWN BY: S. FORD
LATEST REV: JULY, 2018	APP'D BY: E.N.

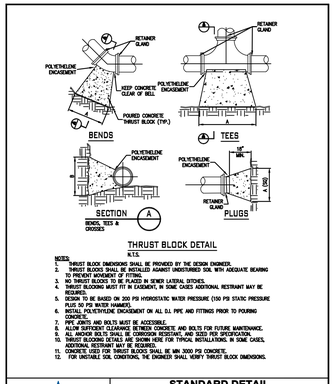


GATE VALVE (12" AND SMALLER)
N.T.S.

INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
153 N. EMERSON AVENUE
GREENWOOD, INDIANA 46143

STANDARD DETAIL
GATE VALVE (12" AND SMALLER)

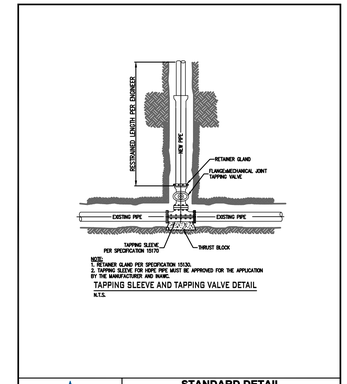
DATE: JANUARY, 2018	DRAWN BY: S. FORD
LATEST REV: JANUARY, 2018	APP'D BY: E.N.



INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
153 N. EMERSON AVENUE
GREENWOOD, INDIANA 46143

STANDARD DETAIL
THRUST BLOCKS

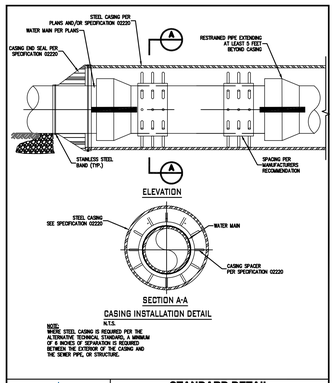
DATE: JANUARY, 2018	DRAWN BY: S. FORD
LATEST REV: JANUARY, 2018	APP'D BY: E.N.



INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
153 N. EMERSON AVENUE
GREENWOOD, INDIANA 46143

STANDARD DETAIL
TAPPING SLEEVE AND TAPPING VALVE

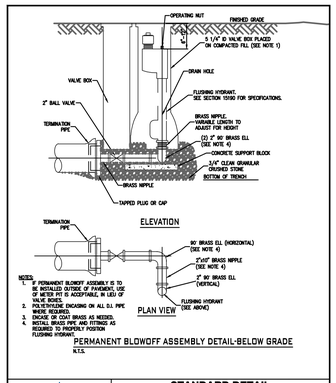
DATE: JANUARY, 2018	DRAWN BY: S. FORD
LATEST REV: JANUARY, 2018	APP'D BY: E.N.



INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
153 N. EMERSON AVENUE
GREENWOOD, INDIANA 46143

STANDARD DETAIL
CASING INSTALLATION

DATE: JANUARY, 2018	DRAWN BY: S. FORD
LATEST REV: JANUARY, 2018	APP'D BY: E.N.

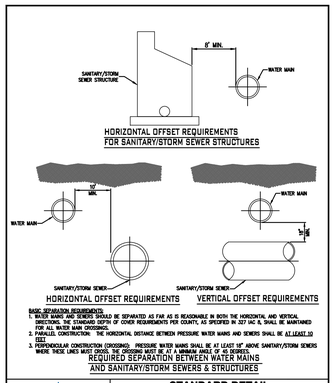


PERMANENT BLOWOFF ASSEMBLY DETAIL-BELOW GRADE
N.T.S.

INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
153 N. EMERSON AVENUE
GREENWOOD, INDIANA 46143

STANDARD DETAIL
PERMANENT BLOWOFF ASSEMBLY DETAIL-BELOW GRADE

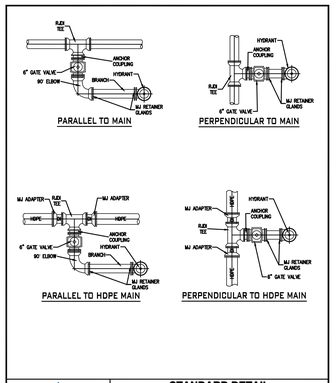
DATE: JANUARY, 2018	DRAWN BY: S. FORD
LATEST REV: JULY, 2018	APP'D BY: E.N.



INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
153 N. EMERSON AVENUE
GREENWOOD, INDIANA 46143

STANDARD DETAIL
SEWER SEPARATION

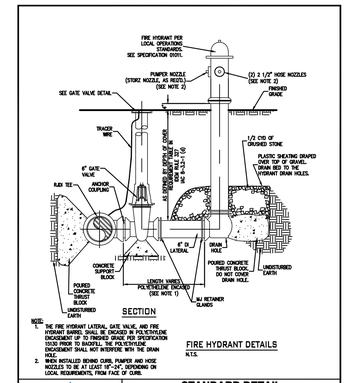
DATE: JANUARY, 2018	DRAWN BY: S. FORD
LATEST REV: JULY, 2018	APP'D BY: E.N.



INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
153 N. EMERSON AVENUE
GREENWOOD, INDIANA 46143

STANDARD DETAIL
FIRE HYDRANT INSTALLATION DETAILS

DATE: JANUARY, 2018	DRAWN BY: S. FORD
LATEST REV: JULY, 2018	APP'D BY: E.N.

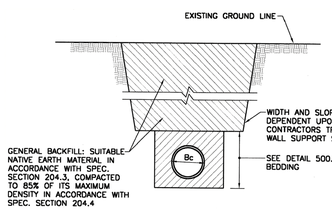


FIRE HYDRANT DETAILS
N.T.S.

INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
153 N. EMERSON AVENUE
GREENWOOD, INDIANA 46143

STANDARD DETAIL
FIRE HYDRANT DETAIL

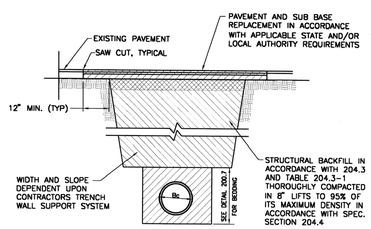
DATE: JANUARY, 2018	DRAWN BY: S. FORD
LATEST REV: JULY, 2018	APP'D BY: E.N.



TRENCH AND GENERAL BACKFILL DETAIL (TURFED /SEEDED/UNIMPROVED AREAS)

NOT TO SCALE

NOTE:
CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM WHICH CONFORMS TO THE REQUIREMENTS OF SPECIFICATION SECTION 204.1



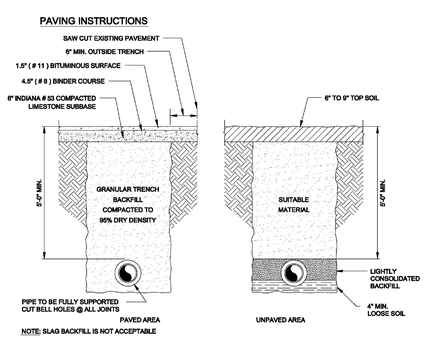
NOTE: CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM WHICH CONFORMS TO THE REQUIREMENTS OF SPEC. SECTION 204.1

TRENCH AND STRUCTURAL BACKFILL UNDER PAVEMENT DETAIL AND OTHER LOCATIONS*

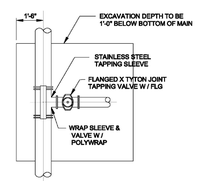
* IN ACCORDANCE WITH SECTION 204.3 OF THE STANDARDS AND SPECIFICATIONS.

(COMPACTION TESTING REQUIRED IN ACCORDANCE WITH SECTION 204.4 OF THE CURRENT VERSION OF THE INDOT STANDARDS AND SPECIFICATIONS)

NOT TO SCALE

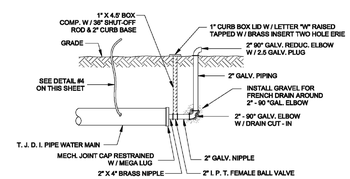


9 TRENCH BACKFILL DETAIL FOR WATER MAIN

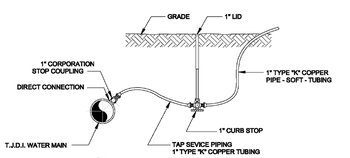


1 MAIN CONNECTION DETAIL

TAPPING



3 TEMPORARY FLUSH-OUT INSTALLATION



4 TYPICAL SAMPLE TAP

WATER UTILITY INSTALLATION NOTES

1. Installation of water main, fittings, valves, fire hydrants, and appurtenances shall be in accordance with Indiana American Water Standards and Specifications, latest revision.
2. It is the contractor's responsibility to field verify the location, size and material of the existing water main prior to construction.
3. At the point of connection to existing water mains, a tapping sleeve and valve may be required to be installed if the existing water main cannot be shut down without impacting customers, to be determined at the pre-construction meeting.
4. For PVC C900 pipe installation: DR14 pipe is required. Deflection of pipe joints and bending of pipes are not permitted. All angles shall be made with proper fittings. When restraint of pipe-to-pipe joints are required, all joints shall be restrained with external split serrated restraint harnesses. Select fill material required for bedding and embedment regardless of pipe's proximity to pavement. PVC C900 pipe is not allowed for pipes larger than 12-inch.
5. For Ductile Iron pipe installation: Thickness Class 52 for typical distribution mains 12-inch nominal size and smaller. When restraint of pipe-to-pipe joints are required, push-on restraining gaskets with integral stainless steel locking segments are permitted on pipe-to-pipe connections 12-inch nominal size and smaller only. Pipe-to-pipe connections greater than 12-inch nominal size shall be restrained per specification section 15105.
6. For HDPE pipe installation: DIPS DR11 for sizes 4 inch and larger, IPS DR9 for 3 inch, and CTS DR9 for sizes smaller than 3 inch. HDPE bends, tees, and crosses are not acceptable. Pressure testing of HDPE pipe differs from ductile iron and PVC pipe, see specification section 15030-3.03. Pipe fusion must be completed by certified technician; certification to be submitted prior to pre-construction meeting.
7. Encase all ductile iron piping, ductile iron fittings, valves, hydrants, restraint harnesses, and all other metallic appurtenances in 12mil blue polyethylene.
8. All fire hydrant laterals shall be ductile iron pipe.
9. All MJ T-bolts and flange bolts shall have Xylan or FluoroKote #1 corrosion resistant coating.
10. All fittings shall be restrained using MJ retainer glands.
11. Thrust restraint to be achieved through the restraint of pipe joints and fittings. Thrust blocks are not an acceptable means of thrust restraint, except when required in connecting to existing water main and for installation of fire hydrants. See specification sections 15105 and 15120 for pipe joint restraint requirements for ductile iron and PVC pipe.
12. Copper-clad steel tracer wire required on installation of all pipe. Tracer wire shall be taped to pipe or polyethylene encasement at a minimum spacing of 10-feet. Splices shall be encased in waterproof connectors. Wire and connectors are to be compatible and from the same manufacturer. Detectable tape is required one foot above pipe. Continuity shall be tested after completion of backfill.
13. Select fill material required for final backfill when within 5-feet of pavement per specification section 02210.
14. Maintain the required 10-feet of horizontal separation and 18-inches of vertical separation from sanitary and storm sewers. Maintain 8-feet of horizontal separation from sanitary and storm structures. See 327 IAC 8-3.2-9 of the Indiana Administrative Code for more information.
15. Maintain minimum cover depth of X" and a maximum of X"+24".

USER NOTES:
- o Depending on water main pipe material, choose between note #3 or #4.
- o X" per 327 IAC 8-3.2-17(d)
  - o 42" min. for SIO

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

Donald C. Torrenga

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com

NEW MIDDLE SCHOOL
WINDFIELD, LAKE COUNTY, INDIANA
DETAILS & SPECIFICATIONS

12-21-2022
10-27-2021
REVISIONS:
DATE: 09-30-2021

CLIENT:
Crown Point Community School
Administrative Service Center
200 East North Street
Crown Point, Indiana 46307

JOB NO: 2021-5010
SCALE: NTS

SHEET
C-2.0

FILE NO: Z:\2021-5010 Crown Point Middle School - Winfield\dwg\2021-5010 Offsite WM Details.dwg 12/21/2022 12:39:18 PM CST

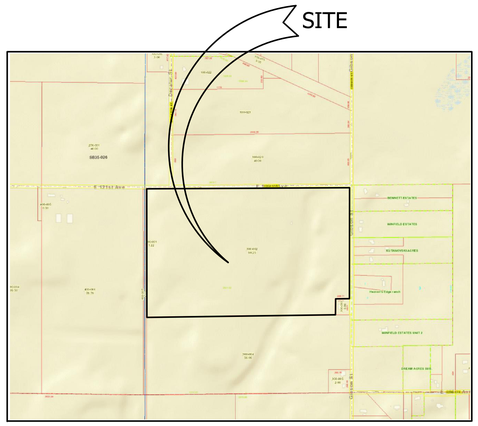
ROBERT A. TAFT MIDDLE SCHOOL
AN ADDITION TO THE TOWN OF WINFIELD, LAKE COUNTY, INDIANA

SUBJECT PARCEL LEGAL DESCRIPTION:
THE NORTH 100 ACRES OF THE SOUTHWEST QUARTER OF SECTION 18, TOWNSHIP 34 NORTH, RANGE 07 WEST OF THE SECOND PRINCIPAL MERIDIAN, IN LAKE COUNTY, INDIANA; EXCEPT THE WEST 20 FEET THEREOF, AND EXCEPT THE SOUTH 208.75 FEET OF THE EAST 208.75 FEET THEREOF.

INDEX

WATER QUALITY STRUCTURE

TYPE	LOCATION (STATE PLANE COORDINATES)
DRY POND/ SOUTHWEST DETENTION BASIN	Northing = 2238708.2993 Easting = 2899649.1103
DRY POND/ SOUTHEAST DETENTION BASIN	Northing = 2238862.5771 Easting = 2901200.6168
FOREBAY AREA N. SIDE SOUTHWEST POND	Northing = 2238914.1844 Easting = 2899629.9539
FOREBAY AREA S. SIDE SOUTHWEST POND	Northing = 2238275.5106 Easting = 2900027.3644
FOREBAY AREA SOUTHEAST POND	Northing = 2238973.6162 Easting = 2901101.5776



VICINITY MAP

Indiana811
Know what's below. Call before you dig.

"IT'S THE LAW"
CALL 2 WORKING DAYS BEFORE YOU DIG
811 or 1-800-382-5544
CALL TOLL FREE
PER INDIANA STATE LAW IC8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

County: Lake
SW Qtr, Sec. 18, T. 34 N, R. 07 W.
Township: Winfield

Date and Revisions:

NO.	DATE	DESCRIPTION	BY
6	12-21-2022	IAW Approved Revisions	DT/SP/ EM
5	12-07-2022	IAW Submittal	DT/SP/ EM
4	08-04-2021	Fourth Engineering Submittal	DT / RT
3	07-19-2021	Third Engineering Submittal	DT / RT
2	06-25-2021	Second Engineering Submittal	DT / RT
1	05-03-2021	Engineering Submittal	DT / RT

OWNER/DEVELOPER:
Crown Point Community School Corporation
Administrative Service Center
200 East North Street
Crown Point, IN 46307
Ph: (219) 663-3371

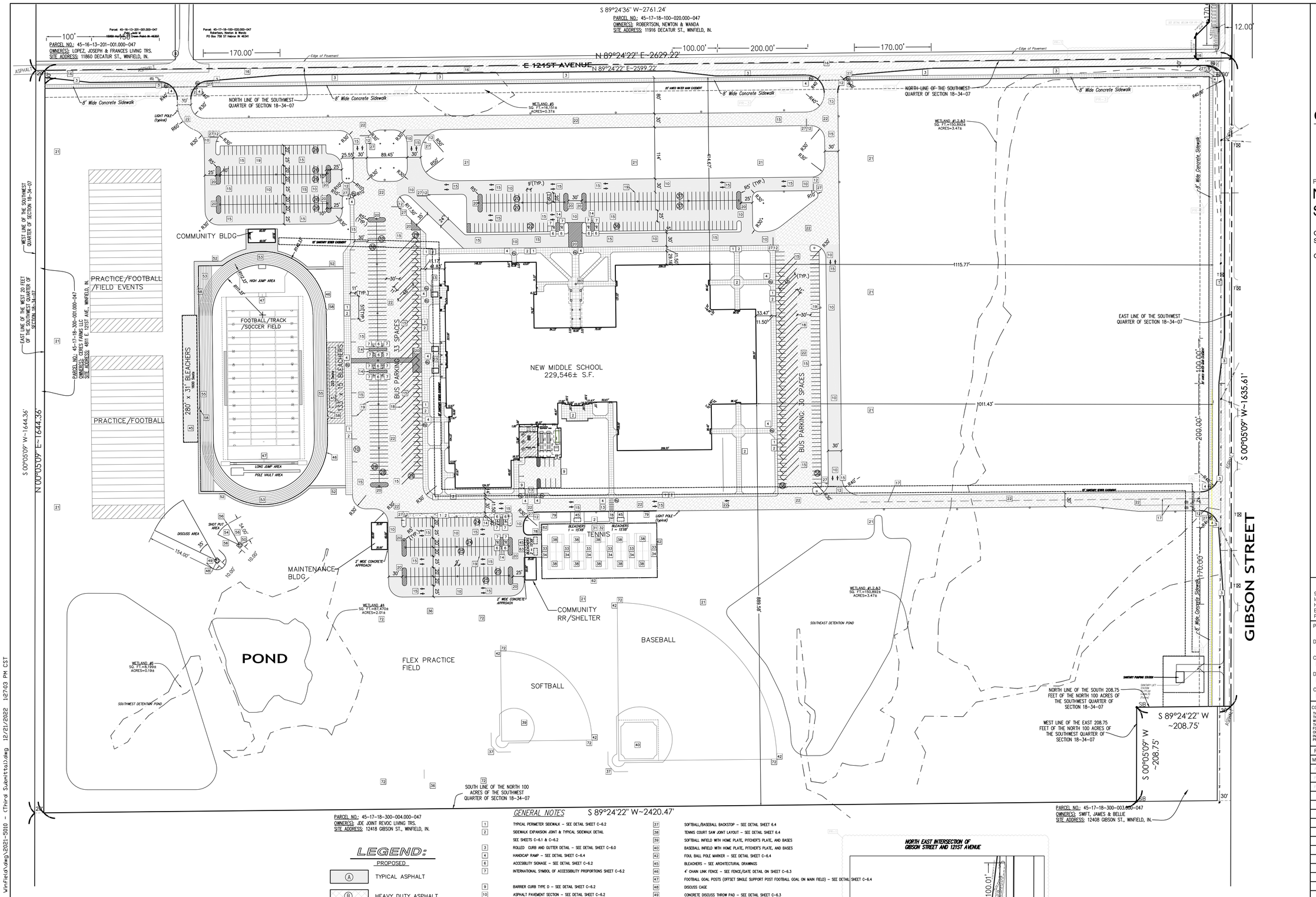
ENGINEER:
Torrenga Engineering, Inc.
907 Ridge Road
Munster, Indiana 46321
Ph.: (219) 836-8918
Fax: (219) 836-1138

DRAWING SET PROGRESS:
- [x] ENGINEERING PLAN - FOR REVIEW / APPROVAL
- [ ] FINAL ENGINEERING - FOR CONSTRUCTION

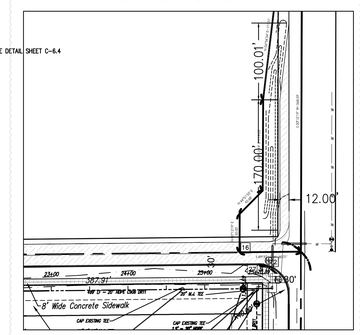
CERTIFIED BY: DONALD C. TORRENGA
P.E. # 19868

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

Donald C. Torrenga



NORTH EAST INTERSECTION OF GIBSON STREET AND 121ST AVENUE



NORTH

GRAPHIC SCALE

80 0 40 80 160 320

(IN FEET)
1 inch = 80 ft.

NOTES:

1. EXISTING ZONING: AGRICULTURE (AG)
   PROPOSED ZONING: PLANNED UNIT DEVELOPMENT
2. TOTAL SITE AREA 95.465±AC. (4,158,465± S.F)
3. SEE ARCHITECTURAL PLAN FOR ACTUAL PROPOSED BUILDINGS DIMENSIONS AND DETAILS.
4. PARKING REQUIREMENTS:

   PARKING SIZE REQUIRED – 9' X 20'
   WITH MINIMUM 25' DRIVE AISLES (TWO LANE AISLE).

   NEW CROWN POINT MIDDLE SCHOOL:

   PROPOSED PARKING:
   TOTAL REGULAR SPACES – 690 SPACES (16 HC SPACES INCLUDED)
   TOTAL BUS SPACES – 73 SPACES

LEGEND:

PROPOSED

- (A) TYPICAL ASPHALT
- (B) HEAVY DUTY ASPHALT
- (C) TOWN OF WINFIELD ASPHALT STANDARD DETAIL
- (CP) CONCRETE PAVEMENT
- (D) ASPHALT SIDEWALK
- (E) CONCRETE SIDEWALK
- LIGHT POLE
- (Hc) HANDICAP ACCESS RAMP
- 100 YEAR EMERGENCY OVERFLOW EASEMENT

GENERAL NOTES

1	TYPICAL PERIMETER SIDEWALK – SEE DETAIL SHEET C-6.2
2	SIDEWALK EXPANSION JOINT & TYPICAL SIDEWALK DETAIL SEE SHEETS C-6.1 & C-6.2
3	ROLLED CURB AND GUTTER DETAIL – SEE DETAIL SHEET C-6.0
4	HANDICAP RAMP – SEE DETAIL SHEET C-6.4
6	ACCESSIBILITY SIGNAGE – SEE DETAIL SHEET C-6.2
7	INTERNATIONAL SYMBOL OF ACCESSIBILITY PROPORTIONS SHEET C-6.2
9	BARRIER CURB TYPE D – SEE DETAIL SHEET C-6.2
10	ASPHALT PAVEMENT SECTION – SEE DETAIL SHEET C-6.2
12	12" WIDE WHITE THERMOPLASTIC STOP BAR
13	CONTINENTAL CROSSWALK DETAIL – SEE DETAIL SHEET C-6.3
14	ACCESSIBILITY AND PARKING STRIPING DETAIL – SEE DETAIL SHEET 6.3, NOTE 2
15	TRAFFIC MARKINGS – SEE DETAIL SHEET C-6.4
16	PAINTED 4" WIDE WHITE DASHED TRAFFIC LINE
17	PAINTED 4" WIDE WHITE SOLID TRAFFIC LINE
18	PAINTED 4" WIDE WHITE BUS PARKING MARKING
19	PAINTED 4" WIDE WHITE PARKING MARKING
20	ACCESSIBILITY AND PARKING STRIPING DETAIL – SEE DETAIL SHEET C6.3, NOTE 1
21	SWALE DETAIL – SEE DETAIL SHEET C-6.2
22	HEAVY DUTY ASPHALT PAVEMENT SECTION – SEE DETAIL SHEET C-6.2
23	CONCRETE PLANTERS SEE ARCHITECTURAL DRAWINGS
27	"STOP" SIGN – SIGN AND POST (FREE STANDING) – SEE DETAIL SHEET C-6.2
29	ROLLED CURB AND GUTTER DETAIL – SEE DETAIL SHEET C-6.1
31	5 TENNIS COURTS COMPLETE WITH TENNIS NET SUPPORTERS, TENNIS
32	TENNIS COURT PAVEMENT – SEE DETAIL SHEET 6.4
33	TENNIS NET SUPPORT POST – SEE DETAIL SHEET 6.4
34	TENNIS NET ANCHOR – SEE DETAIL SHEET 6.4
36	SOCCER GOAL
37	SOFTBALL/BASEBALL BACKSTOP – SEE DETAIL SHEET 6.4
38	TENNIS COURT SAW JOINT LAYOUT – SEE DETAIL SHEET 6.4
39	SOFTBALL INFIELD WITH HOME PLATE, PITCHER'S PLATE, AND BASES
40	BASEBALL INFIELD WITH HOME PLATE, PITCHER'S PLATE, AND BASES
42	FOUL BALL POLE MARKER – SEE DETAIL SHEET C-6.4
45	BLEACHERS – SEE ARCHITECTURAL DRAWINGS
46	4' CHAIN LINK FENCE – SEE FENCE/GATE DETAIL ON SHEET C-6.3
47	FOOTBALL GOAL POSTS (OFFSET SINGLE SUPPORT POST FOOTBALL GOAL ON MAIN FIELD) – SEE DETAIL SHEET C-6.4
48	DISCUSS CAGE
49	CONCRETE DISCUSS THROW PAD – SEE DETAIL SHEET C-6.3
50	CONCRETE SHOT PUT PAD – SEE DETAIL SHEET C-6.3
51	LONG JUMP PIT – SEE DETAIL SHEET C-6.3
52	ASPHALT PAVEMENT- SEE DETAIL SHEET C-6.4
53	ASPHALT PAVEMENT WITH ALL-WEATHER SURFACE – SEE DETAIL SHEET C-6.4
54	8" OF SAND ON FILTER FABRIC
55	2" WIDE WHITE PAINTED STRIPING ON ALL-WEATHER SURFACE
56	2" x 8" TREATED WOOD EDGING WITH 2" X 2" X 12" TREATED WOOD STAKES AT 3' O.C.
58	4' CHAINLINK FENCE GATE SAME MATERIAL AS FENCE – SEE DETAIL SHEET C-6.3
62	10' VINYL COATED FENCE – SEE FENCE/GATE DETAIL ON SHEET C-6.3
63	THREE BEAM GUARDRAIL DETAILS – SEE SHEET C6.3
72	BURIED FIELD CORNER MARKER – SEE DETAIL SHEET 6.4
76	CONCRETE DRIVEWAY APRON DETAIL – SEE SHEET C-6.3
78	NEW 6'0" TALL VINYL COATED FENCE GATE – SEE FENCE/GATE DETAIL ON SHEET C-6.3
79	COMBIND HIGH BACK CURB AND GUTTER – SEE SHEET C-6.2
80	FLAG POLE FOUNDATION – SEE SHEET C-6.2

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

CROWN POINT, INDIANA

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-107
DATE 05/24/21
COORDINATED BY DCT
DRAWN BY DCT EM
CHECKED BY DCT RAT

DONALD C. TORRENCE REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

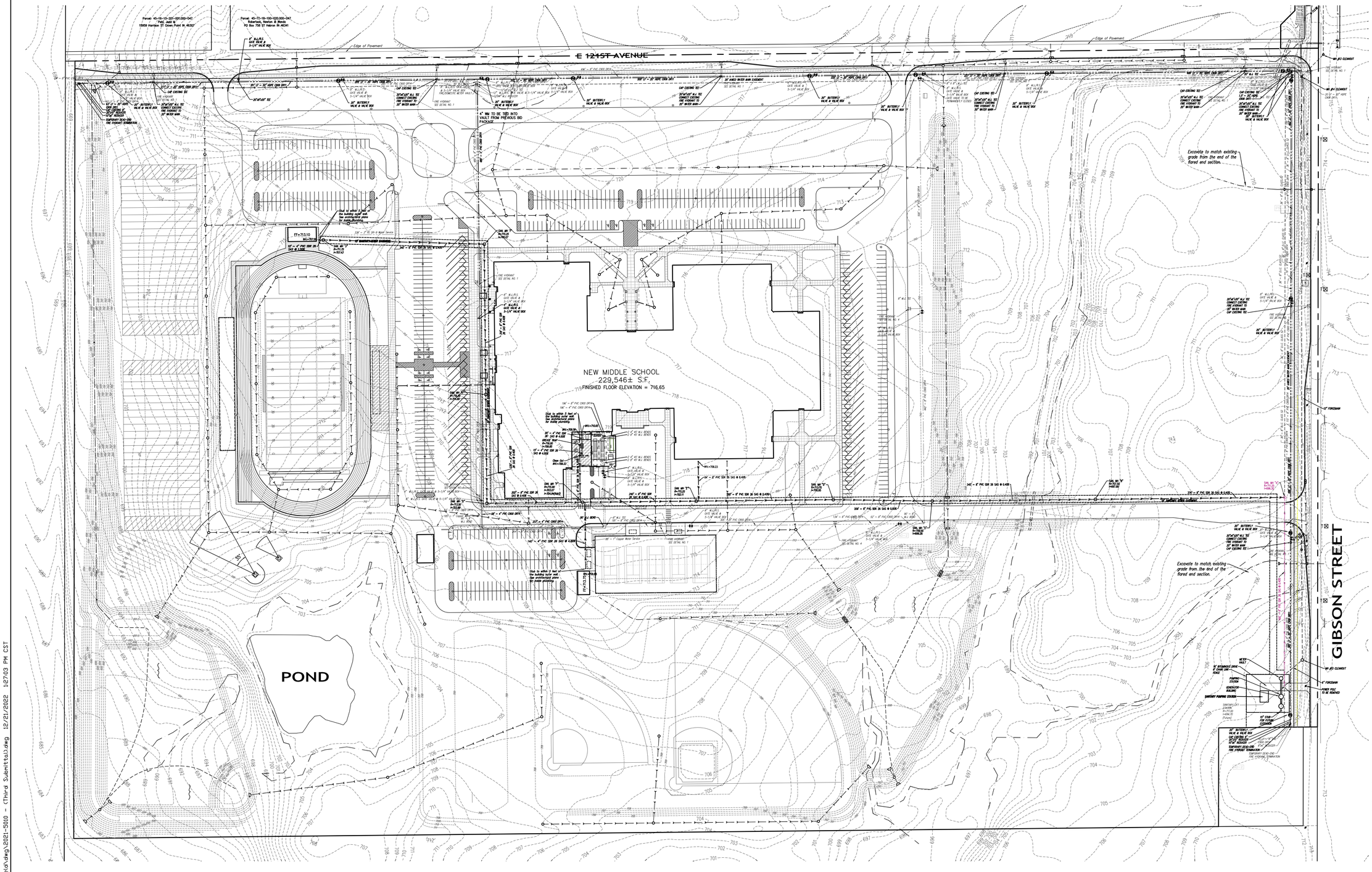
REVISIONS

MARK	DATE	ISSUED FOR
REV 1	06/24/21	CONSTRUCTION PLAN
REV 2	07/29/21	PERMIT PROCESS
REV 3	09/29/21	REVISED PERMIT PLAN

DRAWING
SITE PLAN

PROJECT
NEW MIDDLE SCHOOL

SHEET
C-2.0



NOTE:
THE LIFT STATION, FORCEMAIN AND ANY IMPROVEMENTS REGARDING THE STATION ARE TO BE CONSTRUCTED BY THE TOWN OF WINFIELD UNDER A SEPARATE CONTRACT. THE IMPROVEMENTS ARE SHOWN FOR REFERENCE ONLY. REFER TO THE PLAN SET PREPARED BY LINTECH ENGINEERING FOR DETAILS.

LEGEND:

PROPOSED

- FIRE HYDRANT
- WATER GATE VALVE & BOX
- WATER MAIN
- SANITARY SEWERS
- STORM SEWERS
- CONTOURS
- DRAINAGE FLOW
- GRADE

NORTH

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

CROWN POINT, INDIANA

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-107
DATE 05/24/21
COORDINATED BY DCT
DRAWN BY DCT EM
CHECKED BY DCT RAT

DONALD C. TORBENSEN
REGISTERED
No. 19868
STATE OF INDIANA
PROFESSIONAL ENGINEER

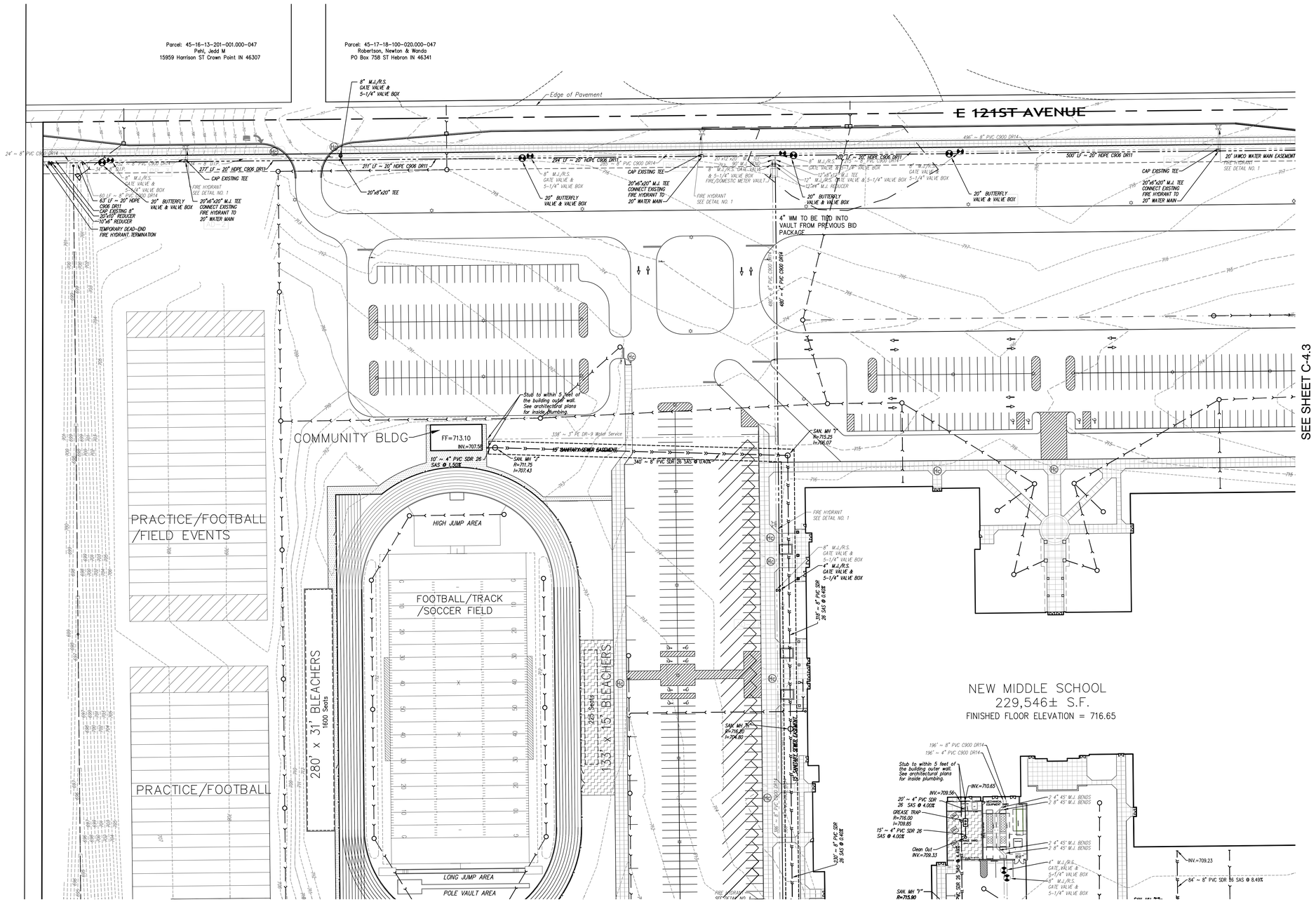
REVISIONS

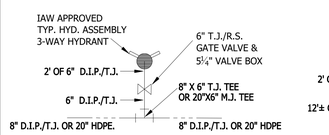
MARK	DATE	ISSUED FOR
	12/07/2022	IAW SUBMITTAL
	12/21/2022	IAW APPROVED REVISIONS

DRAWING
SANITARY SEWERS & WATER MAIN PLAN

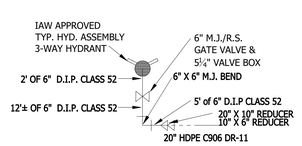
PROJECT
NEW MIDDLE SCHOOL

SHEET
C-4.0





FIRE HYDRANT
DETAIL NO. 1
NTS



TEMPORARY DEAD-END
FIRE HYDRANT
DETAIL NO. 4
NTS

WATER UTILITY INSTALLATION NOTES

1. Installation of water main, fittings, valves, fire hydrants, and appurtenances shall be in accordance with Indiana American Water Standards and Specifications, latest revision.
2. It is the contractor's responsibility to field verify the location, size and material of the existing water main prior to construction.
3. At the point of connection to existing water mains, a tapping sleeve and valve may be required to be installed if the existing water main cannot be shut down without impacting customers, to be determined at the pre-construction meeting.
4. For PVC C900 pipe installation: DR14 pipe is required. Deflection of pipe joints and bending of pipes are not permitted. All angles shall be made with proper fittings. When restraint of pipe-to-pipe joints are required, all joints shall be restrained with external split serrated restraint harnesses. Select fill material required for bedding and embedment regardless of pipe's proximity to pavement. PVC C900 pipe is not allowed for pipes larger than 12-inch.
5. For Ductile Iron pipe installation: Thickness Class 52 for typical distribution mains 12-inch nominal size and smaller. When restraint of pipe-to-pipe joints are required, push-on restraining gaskets with integral stainless steel locking segments are permitted on pipe-to-pipe connections 12-inch nominal size and smaller only. Pipe-to-pipe connections greater than 12-inch nominal size shall be restrained per specification section 15105.
6. For HDPE pipe installation: DIPS DR11 for sizes 4 inch and larger, IPS DR9 for 3 inch, and CTS DR9 for sizes smaller than 3 inch. HDPE bends, tees, and crosses are not acceptable. Pressure testing of HDPE pipe differs from ductile iron and PVC pipe, see specification section 15030-3.03. Pipe fusion must be completed by certified technician; certification to be submitted prior to pre-construction meeting.
7. Encase all ductile iron piping, ductile iron fittings, valves, hydrants, restraint harnesses, and all other metallic appurtenances in 12mil blue polyethylene.
8. All fire hydrant laterals shall be ductile iron pipe.
9. All MJ T-bolts and flange bolts shall have Xylan or FluoroKote #1 corrosion resistant coating.
10. All fittings shall be restrained using MJ retainer glands.

WATER UTILITY INSTALLATION NOTES (continued)

11. Thrust restraint to be achieved through the restraint of pipe joints and fittings. Thrust blocks are not an acceptable means of thrust restraint, except when required in connecting to existing water main and for installation of fire hydrants. See specification sections 15105 and 15120 for pipe joint restraint requirements for ductile iron and PVC pipe.
12. Copper-clad steel tracer wire required on installation of all pipe. Trace wire shall be taped to pipe or polyethylene encasement at a minimum spacing of 10-feet. Splices shall be encased in waterproof connectors. Wire and connectors are to be compatible and from the same manufacturer. Detectable tape is required one foot above pipe. Continuity shall be tested after completion of backfill.
13. Select fill material required for final backfill when within 5-feet of pavement per specification section 02210.
14. Maintain the required 10-feet of horizontal separation and 18-inches of vertical separation from sanitary and storm sewers. Maintain 8-feet of horizontal separation from sanitary and storm structures. See 327 IAC 8-3.2-9 of the Indiana Administrative Code for more information.
15. Maintain minimum cover depth of X" and a maximum of X"+24".

USER NOTES:
- Depending on water main pipe material, choose between note #3 or #4.
- X" per 327 IAC 8-3.2-17(d)
  - 42" min. for SIO

LEGEND:

PROPOSED
- FIRE HYDRANT
- WATER GATE VALVE & BOX
- WATER MAIN
- SANITARY SEWERS
- STORM SEWERS
- CONTOURS
- DRAINAGE FLOW
- GRADE

NORTH
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

Z:\2021-5010 Crown Point Middle School - Winfield\dwg\2021-5010 - Third Submittal.dwg 12/21/2022 12:03 PM CST

GIBRALTAR
DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

CROWN POINT, INDIANA

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-107
DATE 05/24/21
COORDINATED BY DCT
DRAWN BY DCT EM
CHECKED BY DCT RAT

DONALD C. TORRENCE REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

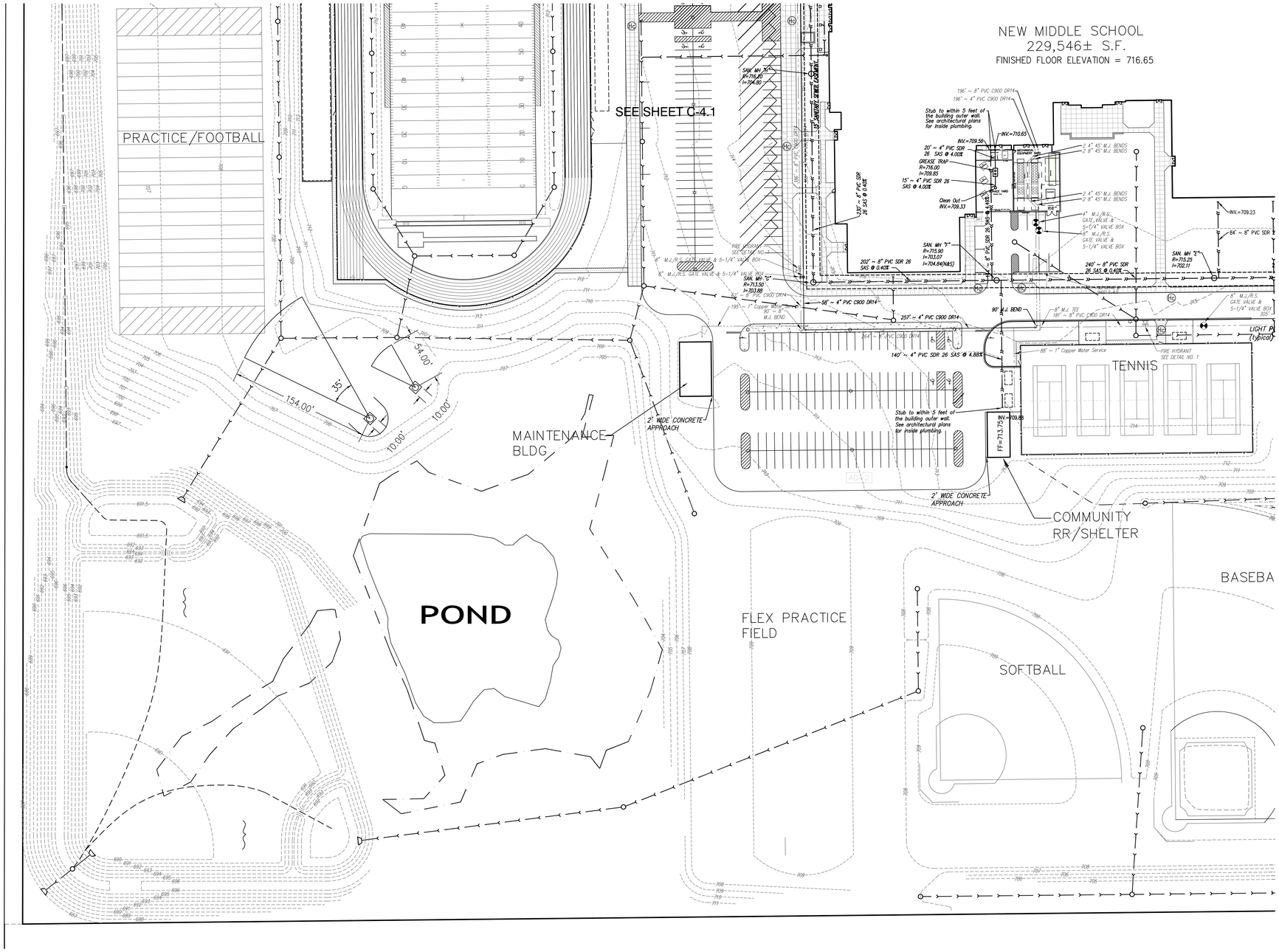
REVISIONS

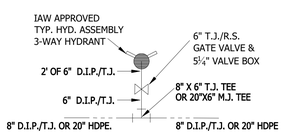
MARK	DATE	ISSUED FOR
	12/07/2022	IAW SUBMITTAL
	12/21/2022	IAW APPROVED REVISIONS

DRAWING
SANITARY SEWERS & WATER MAIN PLAN

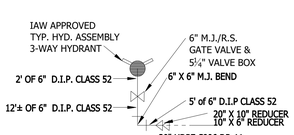
PROJECT
NEW MIDDLE SCHOOL

SHEET
C-4.1





FIRE HYDRANT
DETAIL NO. 1
NTS



TEMPORARY DEAD-END
FIRE HYDRANT
DETAIL NO. 4
NTS

WATER UTILITY INSTALLATION NOTES

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9. All MJ T-bolts and flange bolts shall have Xylan or FluoroKote #1 corrosion resistant coating.
10. All fittings shall be restrained using MJ retainer glands.

WATER UTILITY INSTALLATION NOTES (continued)

11. Thrust restraint to be achieved through the restraint of pipe joints and fittings. Thrust blocks are not an acceptable means of thrust restraint, except when required in connecting to existing water main and for installation of fire hydrants. See specification sections 15105 and 15120 for pipe joint restraint requirements for ductile iron and PVC pipe.
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14. Maintain the required 10-feet of horizontal separation and 18-inches of vertical separation from sanitary and storm sewers. Maintain 8-feet of horizontal separation from sanitary and storm structures. See 327 IAC 8-3.2-9 of the Indiana Administrative Code for more information.
15. Maintain minimum cover depth of X" and a maximum of X"+24".

USER NOTES:
- o Depending on water main pipe material, choose between note #3 or #4.
- o X" per 327 IAC 8-3.2-17(d)
  - o 42" min. for SIO

LEGEND:
- PROPOSED
- FIRE HYDRANT
- WATER GATE VALVE & BOX
- WATER MAIN
- SANITARY SEWERS
- STORM SEWERS
- CONTOURS
- DRAINAGE FLOW
- 700.00 GRADE

NORTH
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

Z:\2021-5010 Crown Point Middle School - Winfield\dwg\2021-5010 - (Third Submittal).dwg 12/21/2022 1:27:03 PM CST

GIBRALTAR
DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

CROWN POINT, INDIANA

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Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
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Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-107
DATE 05/24/21
COORDINATED BY DCT
DRAWN BY DCT EM
CHECKED BY DCT RAT

DONALD C. TORSENA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

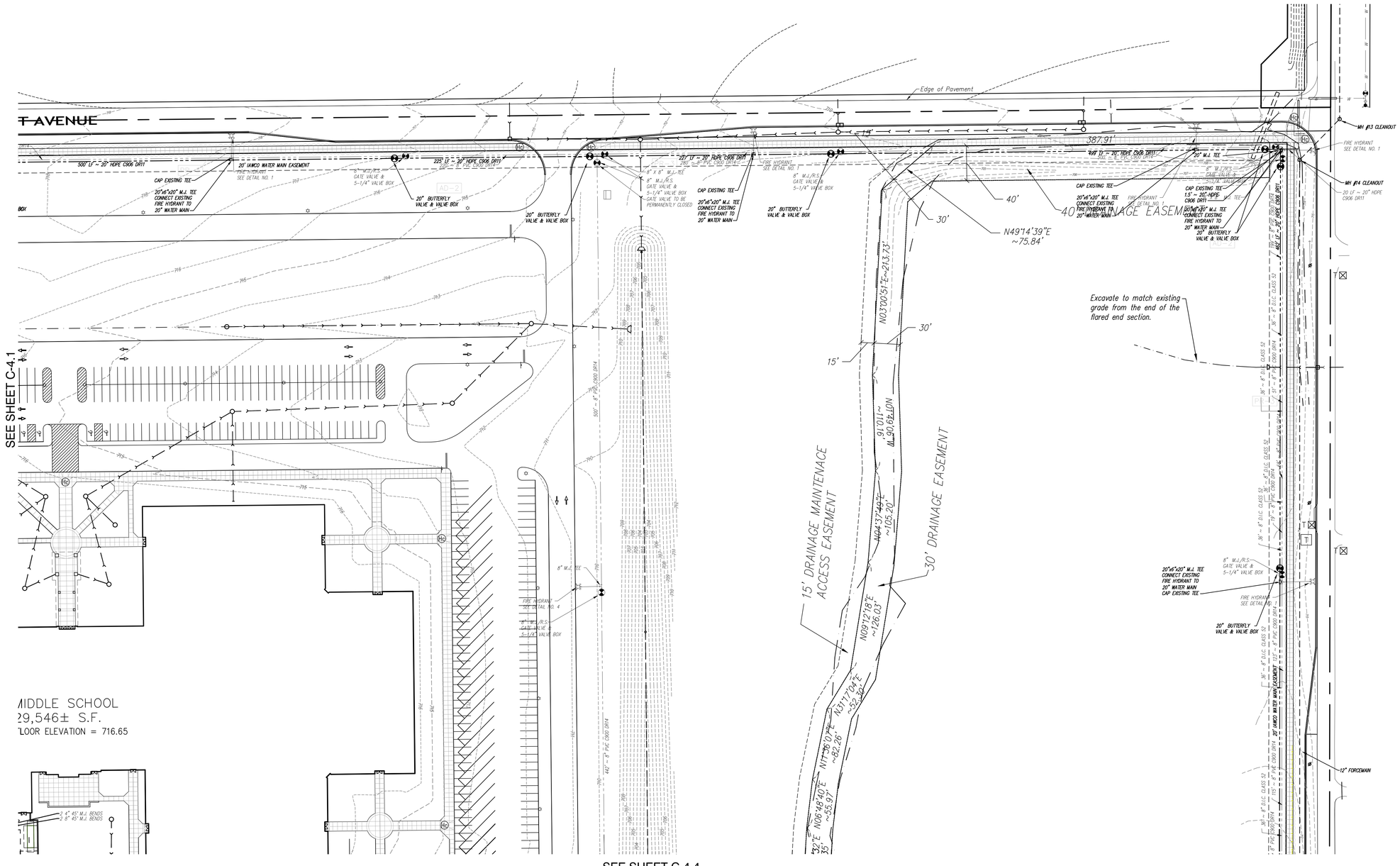
REVISIONS

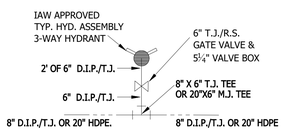
MARK	DATE	ISSUED FOR
REV 0	05/16/2022	ADD NEW NO.
	12/07/2022	IAW SUBMITTAL
	12/21/2022	IAW APPROVED REVISIONS

DRAWING
SANITARY SEWERS & WATER MAIN PLAN

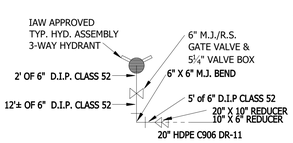
PROJECT
NEW MIDDLE SCHOOL

SHEET
C-4.2





FIRE HYDRANT
DETAIL NO. 1
NTS



TEMPORARY DEAD-END
FIRE HYDRANT
DETAIL NO. 4
NTS

WATER UTILITY INSTALLATION NOTES

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2. It is the contractor's responsibility to field verify the location, size and material of the existing water main prior to construction.
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10. All fittings shall be restrained using MJ retainer glands.

WATER UTILITY INSTALLATION NOTES (continued)

11. Thrust restraint to be achieved through the restraint of pipe joints and fittings. Thrust blocks are not an acceptable means of thrust restraint, except when required in connecting to existing water main and for installation of fire hydrants. See specification sections 15105 and 15120 for pipe joint restraint requirements for ductile iron and PVC pipe.
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15. Maintain minimum cover depth of X" and a maximum of X"+24".

USER NOTES:
- Depending on water main pipe material, choose between note #3 or #4.
- X" per 327 IAC 8-3.2-17(d)
  - 42" min. for SIO

LEGEND:

PROPOSED
- FIRE HYDRANT
- WATER GATE VALVE & BOX
- WATER MAIN
- SANITARY SEWERS
- STORM SEWERS
- CONTOURS
- DRAINAGE FLOW
- GRADE

NOTE:
THE LIFT STATION, FORCEMAIN AND ANY IMPROVEMENTS REGARDING THE STATION ARE TO BE CONSTRUCTED BY THE TOWN OF WINFIELD UNDER A SEPARATE CONTRACT. THE IMPROVEMENTS ARE SHOWN FOR REFERENCE ONLY. REFER TO THE PLAN SET PREPARED BY LINTECH ENGINEERING FOR DETAILS.

NORTH
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

GIBRALTAR
DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

CROWN POINT, INDIANA

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT
21-107
DATE
05/24/21
COORDINATED BY
DCT
DRAWN BY
DCT EM
CHECKED BY
DCT RAT

DONALD C. TORBENSON REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

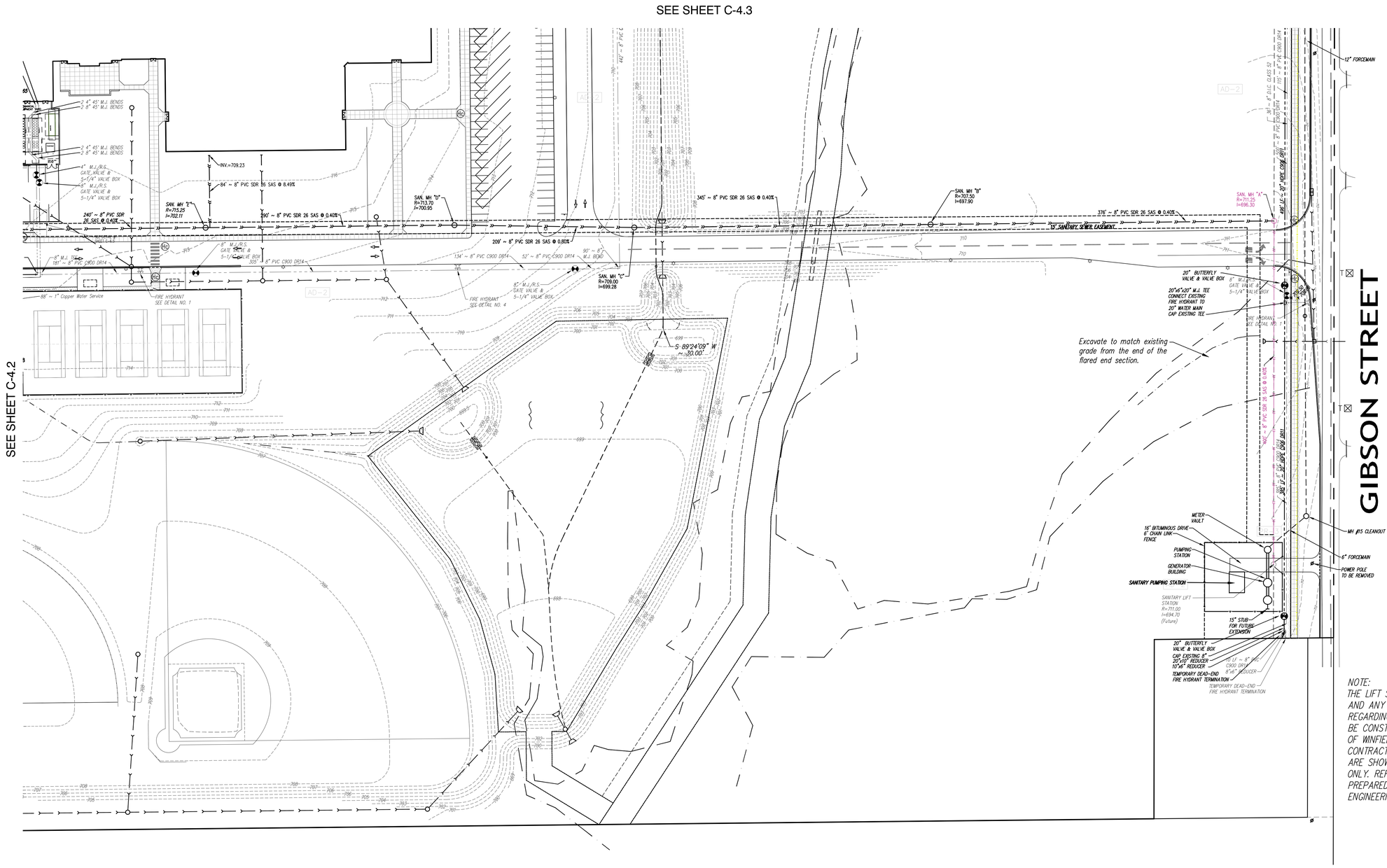
MARK	DATE	ISSUED FOR
	05/24/21	PRELIMINARY NOT FOR CONSTRUCTION
	11/12/21	PRELIMINARY NOT FOR CONSTRUCTION
	12/07/2022	IAW SUBMITTAL
	12/21/2022	IAW APPROVED REVISIONS

DRAWING
SANITARY SEWERS & WATER MAIN PLAN

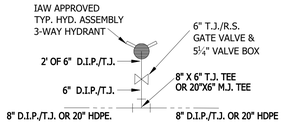
PROJECT
NEW MIDDLE SCHOOL

SHEET
C-4.3

Z:\2021-5010 Crown Point Middle School - Winfield\dwg\2021-5010 - (Third Submittal).dwg 12/21/2022 12:03 PM CST

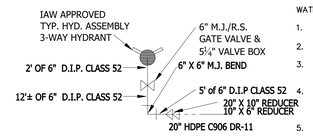


IAW APPROVED
TYP. HYD. ASSEMBLY
3-WAY HYDRANT



FIRE HYDRANT
DETAIL NO. 1
NTS

IAW APPROVED
TYP. HYD. ASSEMBLY
3-WAY HYDRANT



TEMPORARY DEAD-END
FIRE HYDRANT
DETAIL NO. 4
NTS

WATER UTILITY INSTALLATION NOTES

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WATER UTILITY INSTALLATION NOTES (continued)

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USER NOTES:
- o Depending on water main pipe material, choose between note #3 or #4.
- o X" per 327 IAC 8-3.2-17(d)
  - o 42" min. for SIO

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LEGEND:

PROPOSED
- FIRE HYDRANT
- WATER GATE VALVE & BOX
- WATER MAIN
- SANITARY SEWERS
- STORM SEWERS
- CONTOURS
- DRAINAGE FLOW
- GRADE

NORTH
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

GIBRALTAR
DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

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Email info@GibraltarDesign.com
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PROJECT
21-107
DATE
05/24/21
COORDINATED BY
DCT
DRAWN BY
DCT EM
CHECKED BY
DCT RAT

DONALD C. TORRENCE REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

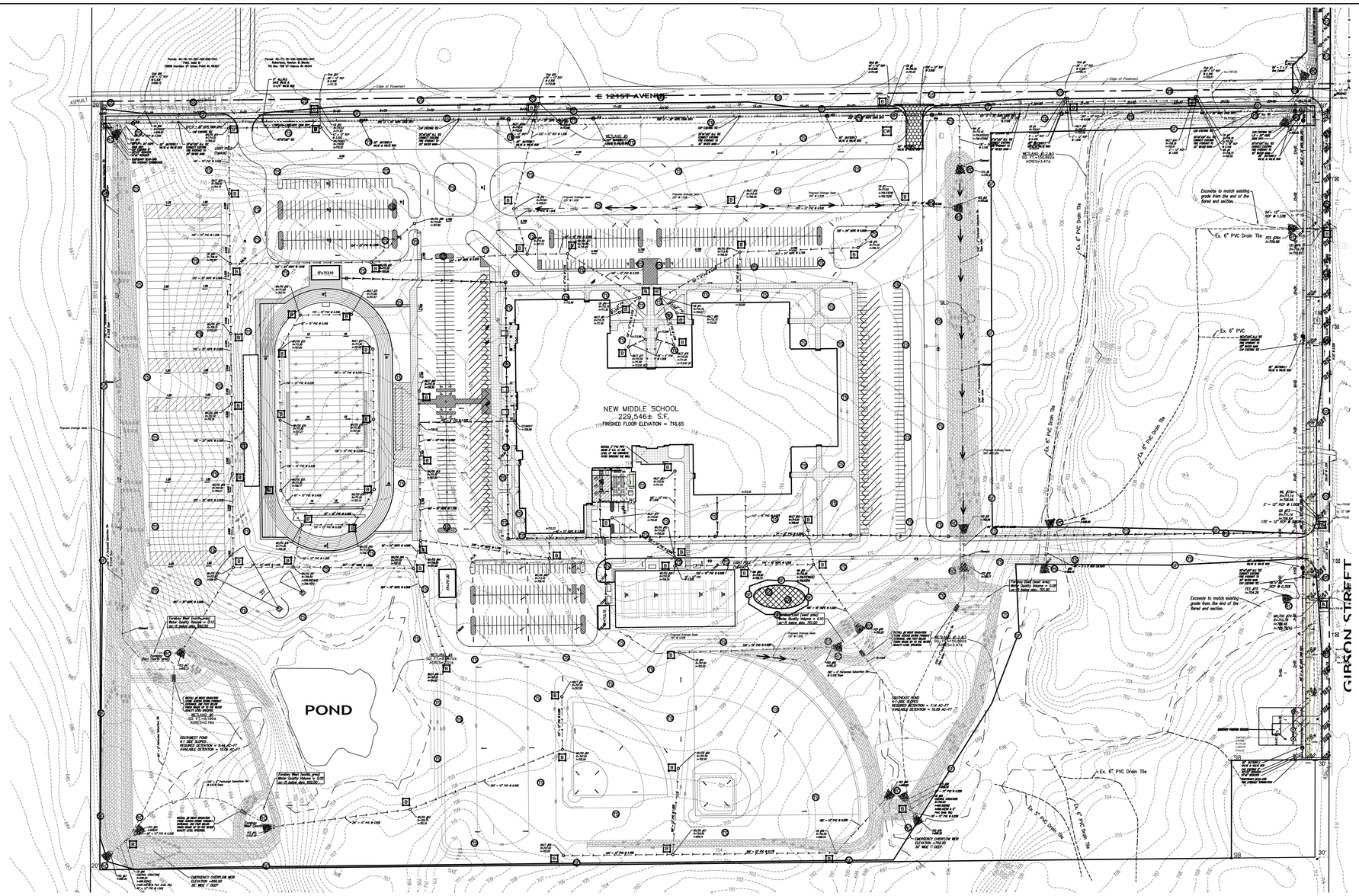
MARK	DATE	ISSUED FOR
	05/24/21	PRELIMINARY REVIEW
	12/07/2022	IAW SUBMITTAL
	12/21/2022	IAW APPROVED REVISIONS

DRAWING
SANITARY SEWERS & WATER MAIN PLAN

PROJECT
NEW MIDDLE SCHOOL

SHEET
C-4.4

Z:\2021-5010 Crown Point Middle School - Winfield\dwg\2021-5010 - (Third Submittal)dwg 12/21/2022 12:03 PM CST



GENERAL NOTES:

1. THIS PROPERTY IS LOCATED IN FLOOD ZONE X (AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN). THERE ARE NO FLOODWAYS AND FLOODWAY FRINGES ON THIS PROPERTY, AS TAKEN FROM FEMA FLOOD INSURANCE RATE MAPS (FIRM) FOR THE TOWN OF WINFIELD, LAKE COUNTY, INDIANA, MAP NUMBER 18089C0269E, EFFECTIVE DATE JANUARY 18, 2012.

2. 04040001030040 MAIN BEAVER DAM DITCH – NILES DITCH

3. STATE OR FEDERAL WATER QUALITY PERMITS ARE REQUIRED FOR THE PROJECT, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) IDEM RULE 5 WATER QUALITY PERMIT IS REQUIRED.

4. AT PRESENT THE SITE IS OPEN FARMLAND AREA WITH TREES SURROUNDING AN EXISTING POND AND DRAINAGE DITCHES.

5. THERE IS PRESENCE OF HYDRIC SOILS ON THIS PROPERTY, (PC) PEWAMO SILTY CLAY LOAM.

6. THERE ARE EXISTING WETLAND AREAS ON THIS PROPERTY AND EXIST ON ADJACENT PROPERTY AS CLASSIFIED BY THE U.S. FISH AND WILDLIFE SERVICE, NATIONAL WETLANDS INVENTORY, AND THE UNITED STATES DEPARTMENT OF THE INTERIOR. THERE ARE NO LAKES OR WATER COURSES, BUT A DETENTION POND DOES EXIST ON THIS PROPERTY. MAIN BEAVER DAM DITCH – NILES DITCH IS THE WATER COURSE WHICH THE STORMWATER FROM THE PROPOSED SITE WILL ULTIMATELY DISCHARGE INTO, AND A TRIBUTARY IS LOCATED ON THE PROJECT SITE.

7. POTENTIAL SOURCE OF STORM WATER DISCHARGE ENTERING THE GROUNDWATER FROM THIS DEVELOPMENT WILL BE THROUGH NATURAL GROUND ABSORPTION ONLY. THERE ARE NO ABANDONED WELLS OR SINKHOLES ON THE PROPERTY.

8. THERE ARE NO SENSITIVE AREAS ASSOCIATED WITH THIS PROPERTY.

9. THERE ARE NO REGULATED DRAINS WITHIN THIS PROPERTY, OR ON ADJACENT PROPERTIES. THERE IS RECORD OR KNOWLEDGE OF EXISTING FARM DRAINS OR FIELD TILE, INLETS AND OUTFALLS LOCATED WITHIN THE EXISTING PROPERTY LIMITS.

10. SOIL STOCKPILES, BORROW AND DISPOSAL AREAS ARE LOCATED WITHIN THE PROJECT SITE. SOIL STOCKPILES SHALL BE SURROUNDED WITH SILT FENCING AT ALL TIMES TO PREVENT EXCESSIVE EROSION, AND IF LEFT UNDISTURBED FOR A PERIOD OF MORE THAN 14 DAYS, IT SHALL BE TEMPORARY SEEDED. UPON SITE COMPLETION THE TOPSOIL STOCKPILE SHALL BE RESPREAD, GRADED, AND PERMANENTLY SEEDED. SOIL STOCKPILES SHALL NOT BE LEFT ON THE SITE FOR GREATER THAN 6 MONTHS AFTER CONSTRUCTION IS COMPLETED. NO SOIL FROM THE STOCKPILES SHALL BE REMOVED FROM THE SITE. ALL EXTRA STOCKPILE MATERIAL SHALL BE RESPREAD IN AREAS DESIGNATED BY THE CONSTRUCTION MANAGER.

11. AREAS WHERE THE PROPOSED DETENTION AREA, BUILDING, AND DRIVES AS WELL AS AREAS WHERE PROPOSED UTILITIES ARE LOCATED WILL BE DISTURBED DURING CONSTRUCTION. IN ALL OTHER AREAS, EXISTING VEGETATIVE COVER WILL BE PRESERVED.

12. FUEL STORAGE AREA IF REQUIRED SHALL BE WITHIN THE CONSTRUCTION STAGING AREA, FUEL SHALL BE STORED IN APPROVED MOBILE REFUELING TANK LOCATED AWAY FROM DRAINAGE STRUCTURES AND CHANNELS. FIRE EXTINGUISHERS SHALL BE LOCATED NEAR FUEL STORAGE AREA AND BE OF SUITABLE TYPE, POSTED, AND BE MAINTAINED IN GOOD CONDITION.

13. TEMPORARY SEED ALL AREAS OF BARE SOIL (WITH THE ADDITION OF A BLANKET WHERE SLOPES ARE 4:1 OR GREATER) THAT WILL REMAIN UNDISTURBED FOR A PERIOD OF MORE THAN 14 DAYS. SEEDING: OPTIMUM SEEDING DATED ARE MARCH 1 – MAY 10 AND AUGUST 10 – SEPTEMBER 30. SEEDING DATES BETWEEN MAY 10 AND AUGUST 10, MAY NEED TO BE IRRIGATED. FOR SEEDING RECOMMENDATIONS SEE PRACTICE 3.12, INDIANA STORM WATER QUALITY MANUAL.

14. ALL SOIL STOCKPILES, AREAS THAT ARE DISTURBED DURING CONSTRUCTION, AND DRAINAGE SWALES WHICH ARE SCHEDULED OR LIKELY TO BE LEFT INACTIVE FOR FOURTEEN (14) CALENDAR DAYS OR MORE MUST BE TEMPORARILY OR PERMANENTLY SEEDED WITH MEASURES APPROPRIATE FOR THE SEASON.

15. LOCATION OF TOWN'S STORMWATER PERMIT AND THE ON-SITE POSTING, OF THE COMPLETE RULE 5 NOI WITH ASSIGNED PERMIT NUMBER, NOS LETTERS AND LOCATION OF THE COMPLETE SET OF ENGINEERING PLANS, SHALL BE AVAILABLE AT THE ENTRANCE TO THE SITE AND VISIBLE TO THE PUBLIC.

16. ALL APPLICABLE MATERIAL SAFETY DATA SHEETS (MSDS) SHOULD BE INCLUDED ON-SITE FOR MATERIALS EXPECTED POLLUTANTS OF CONCERN FOR THE PROJECT SITE.

17. SITE ELEVATIONS ARE BASED ON NAVD 88, AND HORIZONTAL DATUM IS BASED ON INDIANA STATE PLANE COORDINATES NAD 83.

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PROJECT
CROWN POINT NEW MIDDLE SCHOOL

FOR:
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CROWN POINT, INDIANA

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SHEET
C-5.0

SWPPP LEGEND:

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- SOIL STOCK PILE
- BASKET INSERT INLET PROTECTION
- GRADE LIMITS (SEE NOTE 18)
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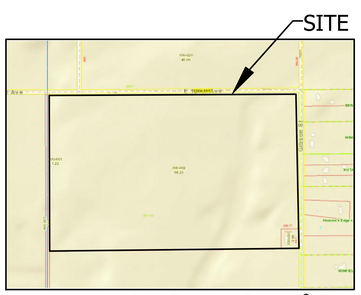
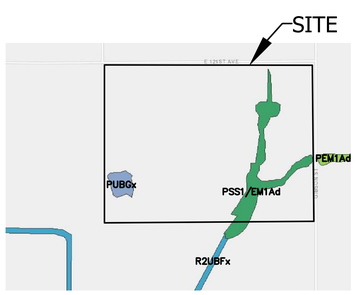
- GRADES (PROPOSED)
- ROCK CHUTE
- GRASS LINED CHANNEL
- STREET SWEEPING
- EROSION CONTROL BLANKET

Temporary stabilization plans and sequence of implementation.

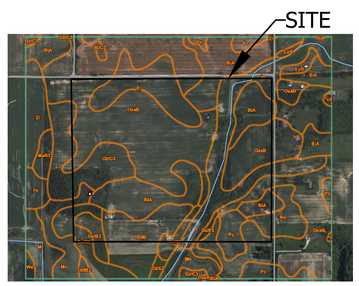
a. On site posting of the complete Rule 5 NOI, NOS letter, and Town Stormwater Permit. Location of the posting and plans shall be made available by the owners contractor.
b. Installation of all erosion/sedimentation controls including stabilized construction entrance, silt fences, etc... per the engineering plans.
c. Clearing and grubbing
d. Topsoil stockpile surrounded with silt fencing.
e. Rough cut and fill of all proposed detention area, and other major grading per the engineering plans shall be done to rough grades at the start of construction to prevent excessive soil erosion due to construction.
f. Silt fence to be placed around the perimeter of the detention basin once it has been completed and stabilized.
g. Construction of storm sewers and other utility.
h. Implementation of storm sewer inlet protection at each open-grate structure (basket insert inlet protection, as per engineering plans).
i. Construct buildings and driveway.
j. Upon site completion when no additional disturbance is anticipated stockpile shall be respread, graded, and all disturbed areas shall be permanent seeded, mulched, and landscaped.
k. Complete permanent erosion control and restoration of site vegetation. Erosion control measures are to be removed upon permanent vegetative cover being established. Note the NOI letter will remain active until NOTI letter is filed, weekly inspections and inspections after a 0.5-inch rainfall event shall be required by owner.
l. Submit NOT letter for Rule 5.



VICINITY MAP
NOT TO SCALE
NORTH



WETLANDS MAP
NOT TO SCALE
NORTH

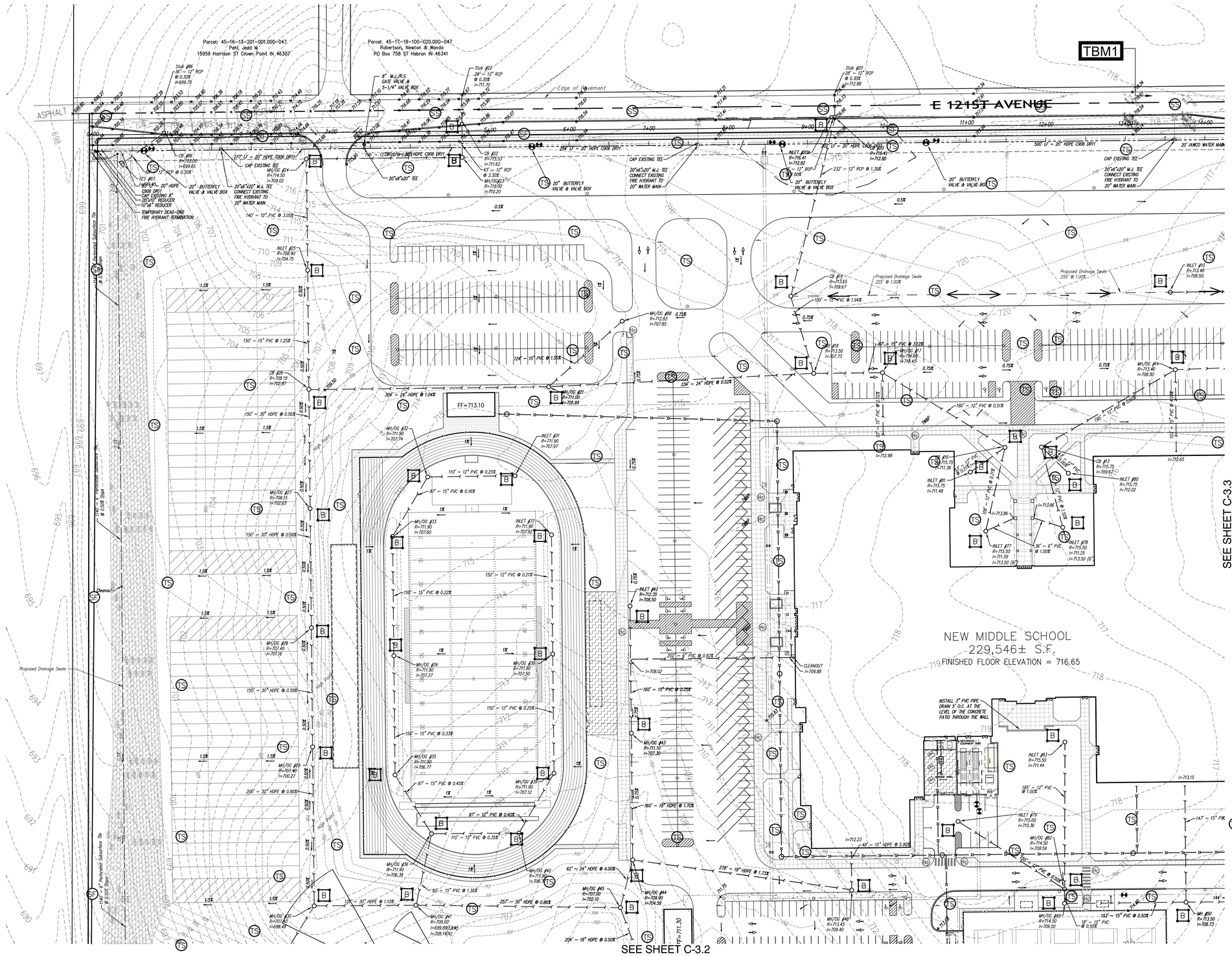


SOIL MAP
NOT TO SCALE
NORTH

MAP UNIT SYMBOL	MAP UNIT NAME
EI	ELLIOT SILT LOAM, 0 TO 2 PERCENT SLOPES
BlA	BLOUNT SILT LOAM, LAKE MICHIGAN LOBE, 0 TO 2 PERCENT SLOPES
MaB2	MARKHAM SILT LOAM, 2 TO 6 PERCENT SLOPES, ERODED
Mo	MILFORD SILT LOAM, OVERWASH
OzaB	OZAUKEE SILT LOAM, 2 TO 6 PERCENT SLOPES
OzLB3	OZAUKEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES, SEVERELY ERODED
OzLC3	OZAUKEE SILTY CLAY LOAM, 2 TO 12 PERCENT SLOPES, SEVERELY ERODED
Pc	PEWAMO SILTY CLAY LOAM, CALCAREOUS VARIANT

NORTH
GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

Z:\2021-5010 Crown Point Middle School - Winfield\dwg\2021-5010 - (Third Submittal).dwg 12/21/2022 12:03 PM CST



SWPPP LEGEND:

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- GRADES (PROPOSED)
- ROCK CHUTE
- GRASS LINED CHANNEL
- STREET SWEEPING
- EROSION CONTROL BLANKET

LEGEND

PROPOSED

- MANHOLE
- CATCH BASIN/INLET
- FIRE HYDRANT
- WATER VALVE
- GRADE PROPOSED
- FG=000.00 — FINISHED GRADE
- STORM SEWER
- SANITARY SEWER
- WATER MAIN
- CONTOURS
- DRAINAGE FLOW
- P — PAVEMENT
- TC — TOP OF CURB
- TW — TOP OF WALK
- SB — SOIL BORING LOCATION

NORTH

GRAPHIC SCALE

50 0 25 50 100 200

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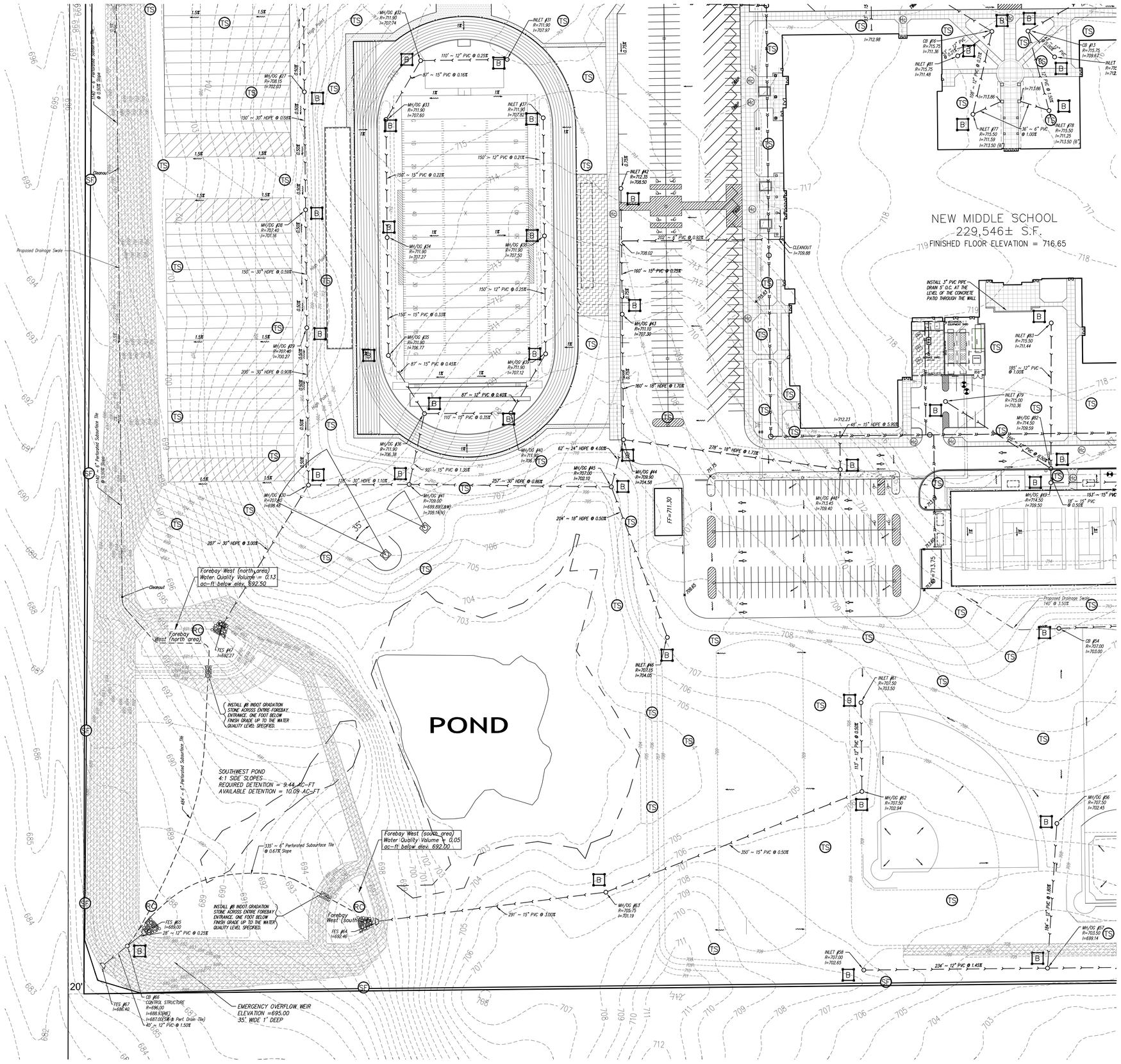
SHEET
C-5.1



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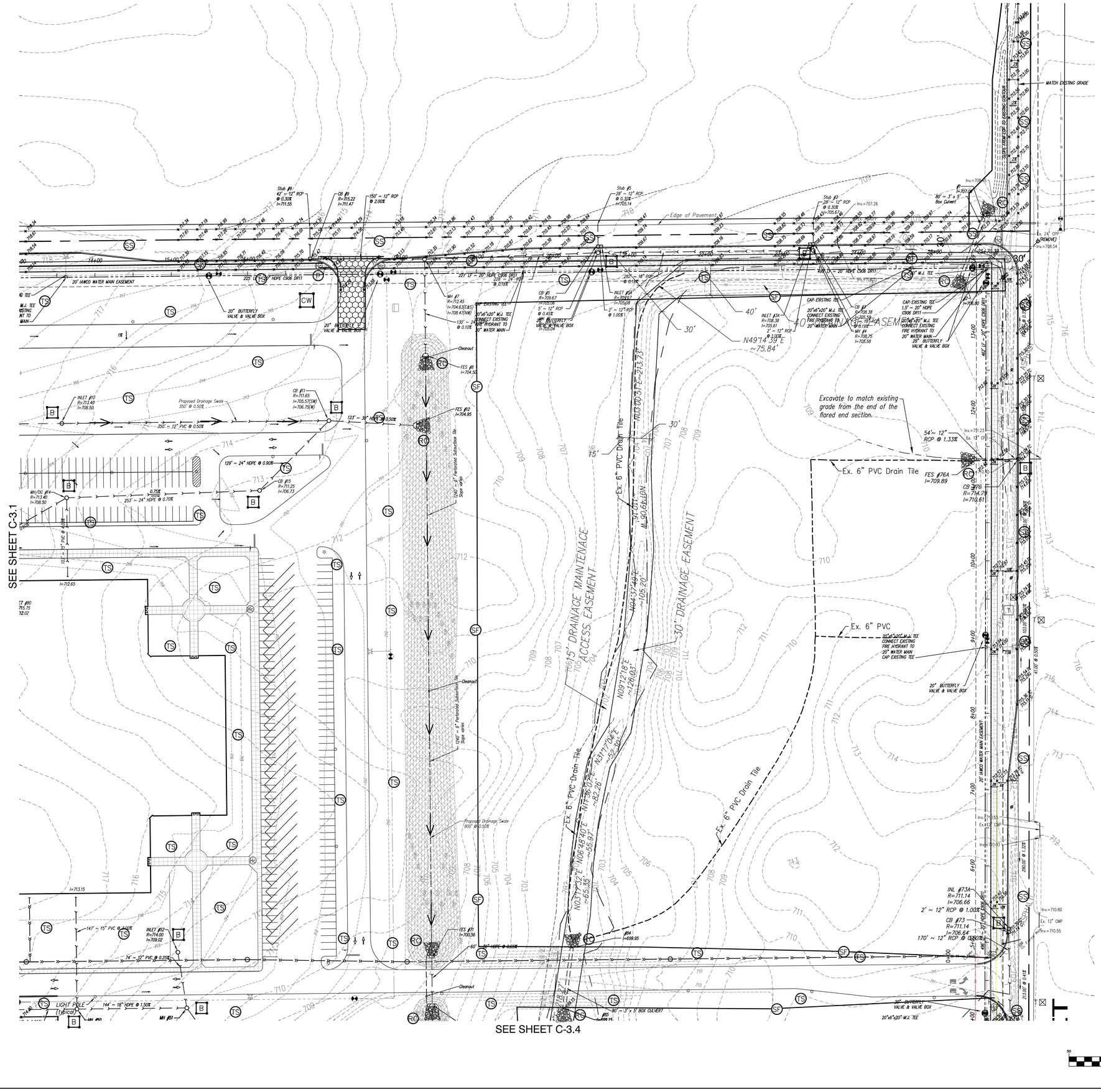
C-5.2



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LEGEND

PROPOSED

- MANHOLE
- CATCH BASIN/INLET
- FIRE HYDRANT
- WATER VALVE
- x.xx.00 GRADE PROPOSED
- FG=000.00 FINISHED GRADE
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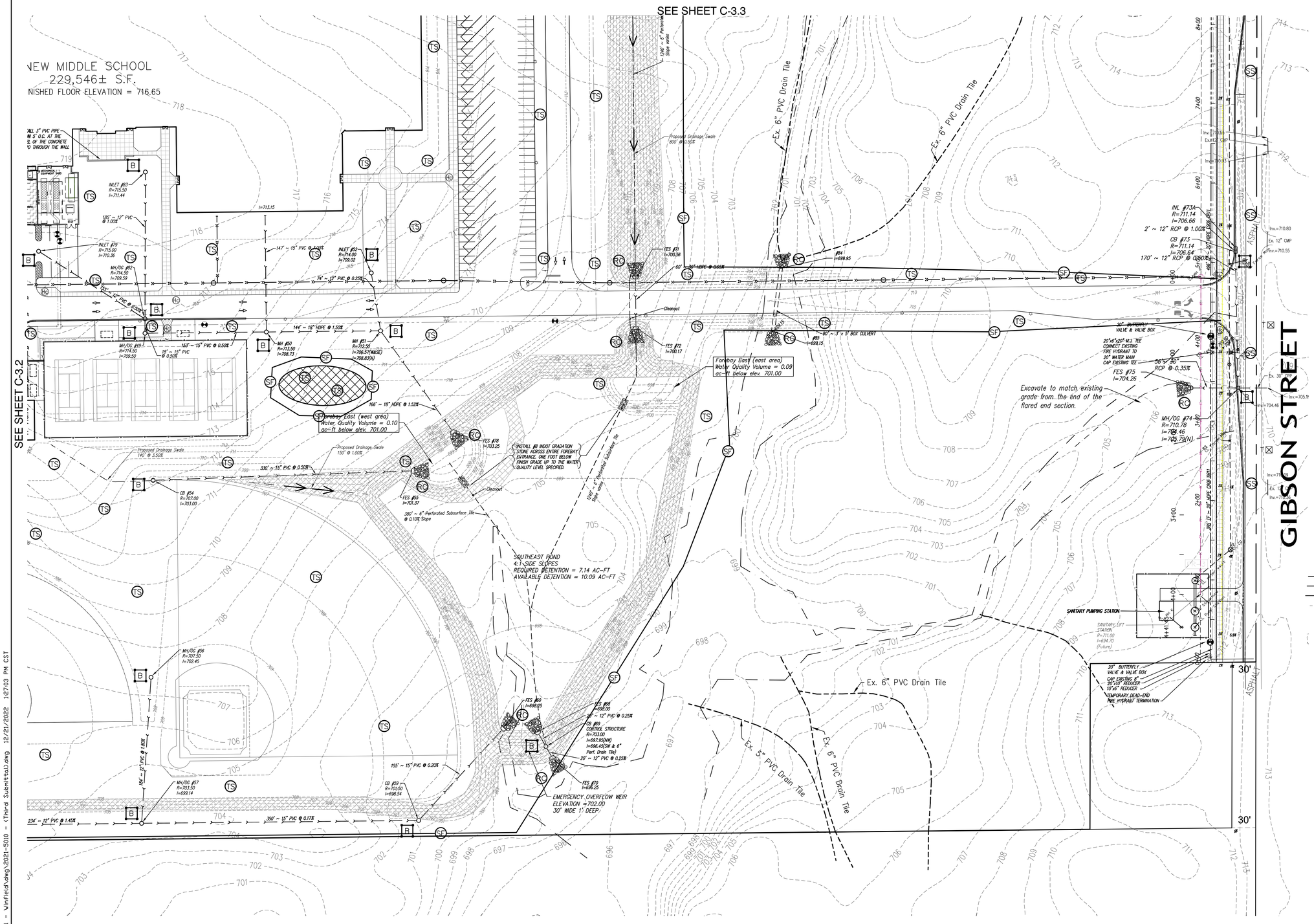
SHEET
C-5.3



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(IN FEET)
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LEGEND
PROPOSED

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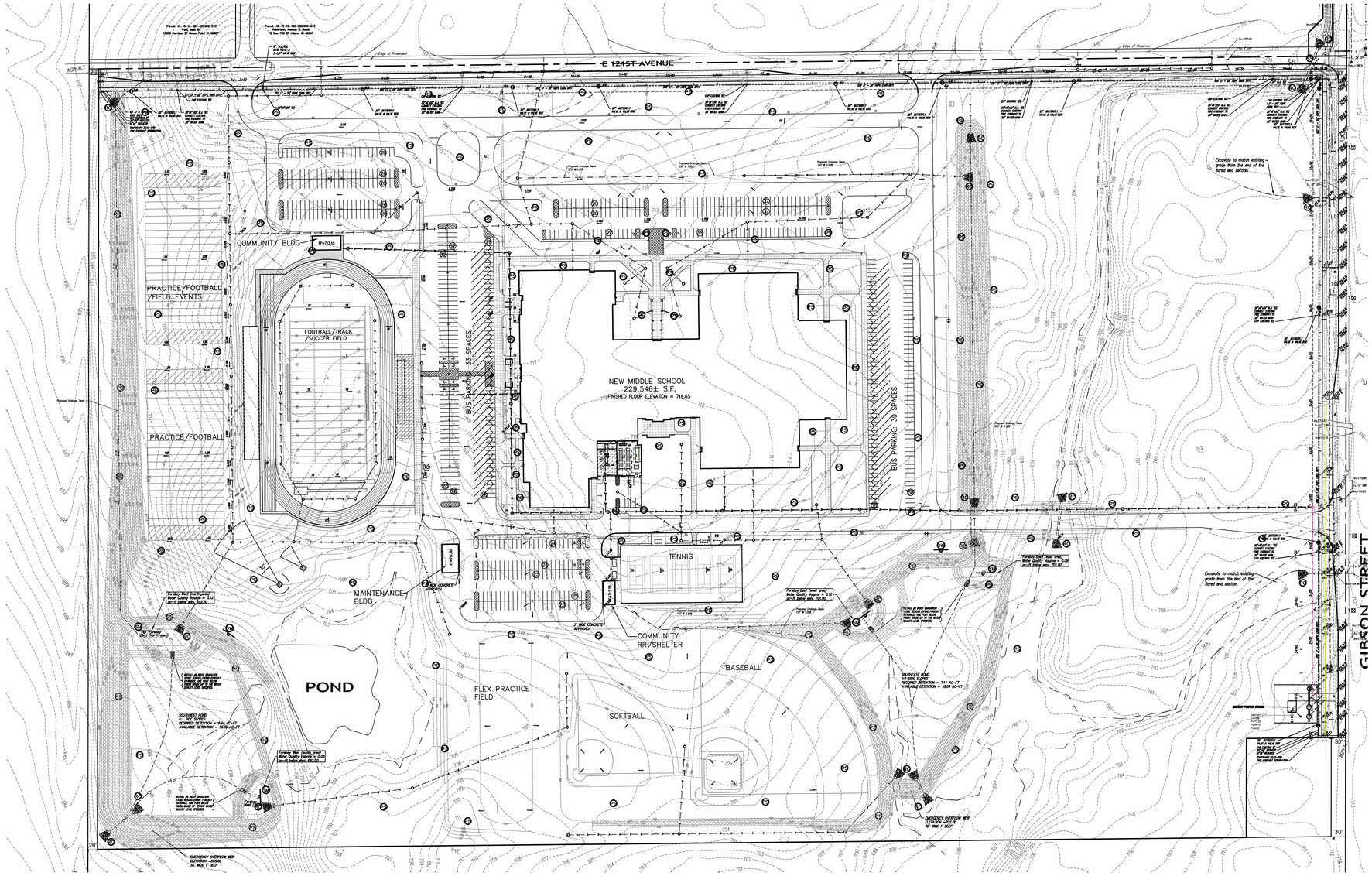
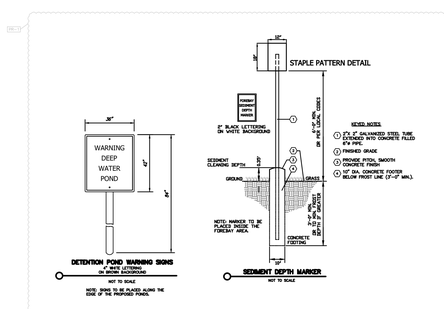


SWPPP LEGEND:

- PS – PERMANENT SEEDING
- XXX – CONTOUR (PROPOSED)
- XX.XX – GRADES (PROPOSED)
- RC – ROCK CHUTE
- EROSION CONTROL BLANKET
- SM – FOREBAY SEDIMENT MARKER
- DW – WARNING DEEP WATER POND SIGN

RESPONSIBLE INDIVIDUAL FOR SWPPP

NAME:	TODD TERRILL, SUPERINTENDENT
BUSINESS:	CROWN POINT COMMUNITY SCHOOL CORPORATION
ADDRESS:	200 EAST NORTH STREET CROWN POINT, INDIANA 46307
PHONE:	(219) 663-3371
FAX:	(219) 662-4304
E-MAIL:	tterrill@cps.k12.in.us



NORTH
GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
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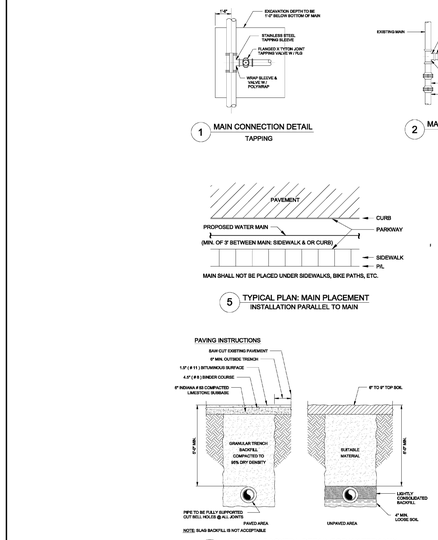
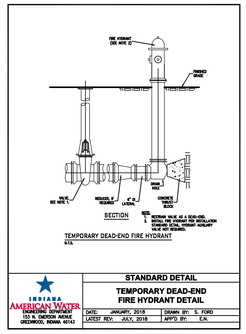
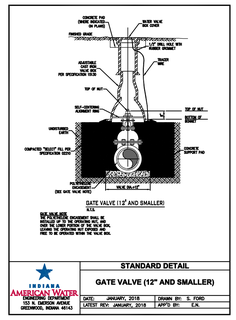
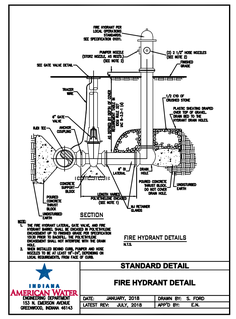
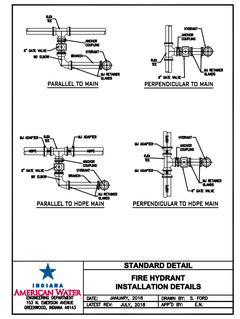
SHEET
C-5.5

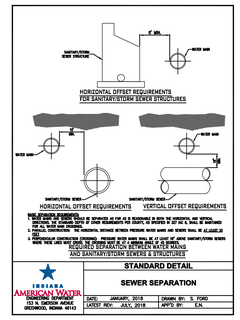


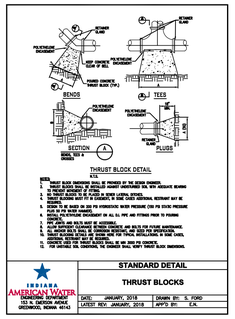


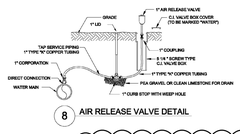










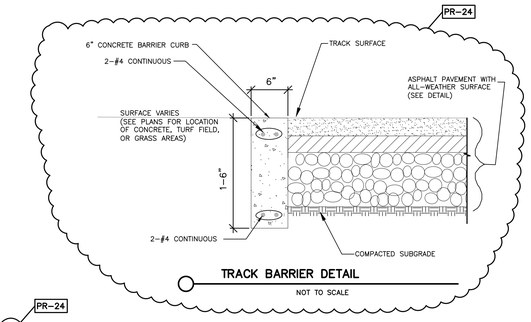


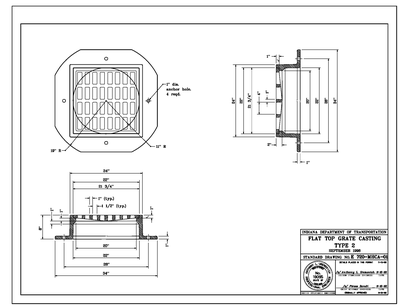
GENERAL CONSTRUCTION NOTES

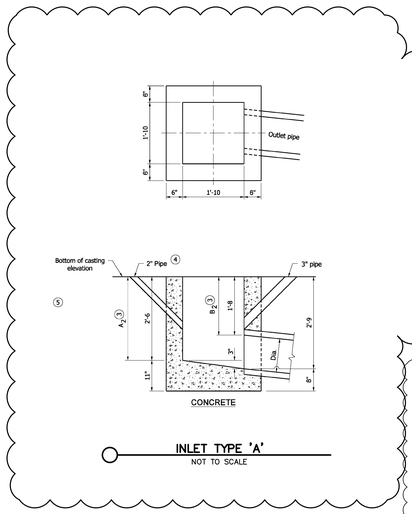
1. INDIANA AMERICAN WATER'S SPECIFICATIONS AND ENGINEERING REQUIREMENTS FOR THE INSTALLATION OF WATER MAINS AND APPURTENANCES SHALL PREVAIL.
2. ALL DUCTILE IRON WATER MAINS AND APPURTENANCES SHALL BE ENCASED (SEE SPECIFICATIONS).
3. ALL FUTURE OR EXISTING PAVEMENT AREAS SHALL BE COMPACTED BY MECHANICAL MEANS IN COMPACTED LAYERS NOT TO EXCEED 8 INCHES IN LOOSE DEPTH AND IN ACCORDANCE WITH INDOT STANDARD SPECIFICATIONS, SEC. 715.
4. UNSUITABLE BACKFILL MATERIAL SHALL BE REMOVED FROM THE SITE AND REPLACED WITH SUITABLE MATERIAL OR APPROVED EQUIVALENT AS DIRECTED (SEE SPECIFICATIONS).
5. CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF THE INDIANA SOIL EROSION AND SEDIMENTATION CONTROL GUIDELINES.
6. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF ALL CONSTRUCTION PERMITS (I.E. CITY, COUNTY, STATE, RAILROAD, DNR, CORPS, OF ENGINEERS, EMA, ETC.)
7. CONTRACTOR SHALL VERIFY ALL RIGHTS-OF-WAY, PROPERTY LINES, OTHER UTILITY AND UNDER GROUND FACILITY LOCATIONS BEFORE DIGGING.
8. CONTRACTORS SHALL KEEP ACCURATE DAILY RECORDS TO DEVELOP THE AS-BUILT DRAWINGS REQUIRED BY THE SPECIFICATIONS. DAILY CONSTRUCTION REPORTS SHALL BE PROVIDED ON A DAILY BASIS.
9. U.S. PIPE FIELD "LOK" GASKET SYSTEM, OR APPROVED EQUAL, SHALL BE USED ON 4-INCH THROUGH 16-INCH PIPE (SEE SPECIFICATIONS).
10. WHEN THE ELEVATION OF THE PAVEMENT IS LOWER THAN THE ELEVATION OF THE GROUND WHERE THE PIPE IS TO BE LAID, THE PIPE SHALL BE LAID TO PROVIDE A COVER OF 18 INCHES AS MEASURED NO MORE THAN 72 INCHES AS MEASURED FROM THE TOP OF THE PIPE TO FINISHED STREET PAVEMENT, UNLESS OTHERWISE DIRECTED BY THE COMPANY'S REPRESENTATIVE. WHEN THE ELEVATION OF THE PAVEMENT IS HIGHER THAN THE ELEVATION OF THE GROUND WHERE THE PIPE IS TO BE LAID, THE PIPE SHALL BE LAID TO PROVIDE A COVER OF LEAST 18 INCHES AND NO MORE THAN 72 INCHES AS MEASURED FROM THE TOP OF THE PIPE TO FINISHED GRADE OF THE GROUND, UNLESS OTHERWISE DIRECTED BY THE COMPANY'S REPRESENTATIVE.
11. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) RULES AND REGULATIONS AT ALL TIMES.
12. CONTRACTOR TO PRESSURE TEST, LEAK TEST, AND DISINFECT WATER MAIN PER UAW SPECIFICATIONS.
13. CONTRACTORS SHALL SUBMIT A TRAFFIC CONTROL PLAN, TO BE APPROVED BY OWNER AND INDOT, PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL PROVIDE ANY AND ALL TRAFFIC CONTROL, CONSTRUCTION SIGNS, BARRICADES, ETC. SHALL BE PLACED AS NOTED OR WHERE APPROPRIATE.

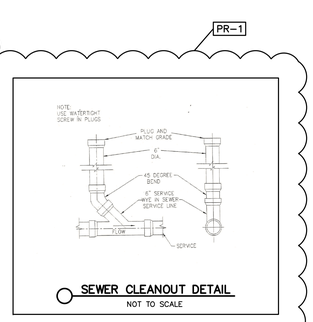
ABBREVIATIONS

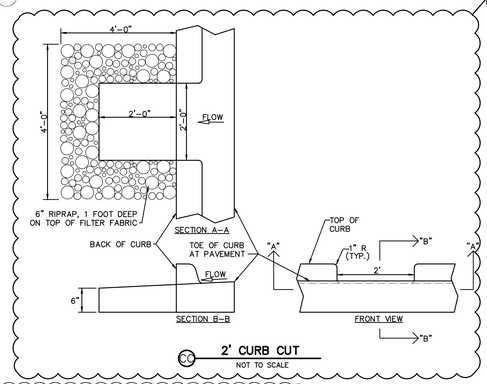
M.J.	MECHANICAL JOINT
T.J.	TYTON JOINT
T.J.R.S.	TYTON JOINT RESILIENT SEATED GATE VALVE
D.I.	DUCTILE IRON
FLG	FIELD "LOK" GASKET FOR U.S. TYTON JOINT PIPE OR EQUAL
P.E.	PLAIN END
M.J.	MECHANICAL JOINT
R.S.	RESILIENT SEATED GATE VALVE
P.C.	PRESSURE CLASS 350 D.I. PIPE
B/T	BETWEEN
M.H.	MAN HOLE

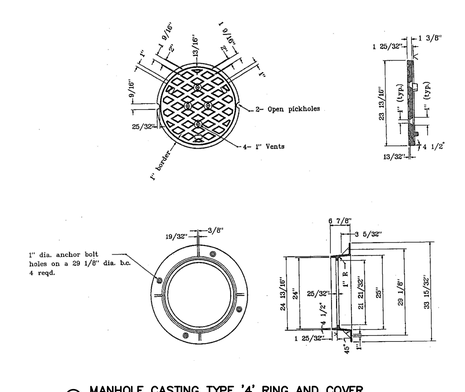


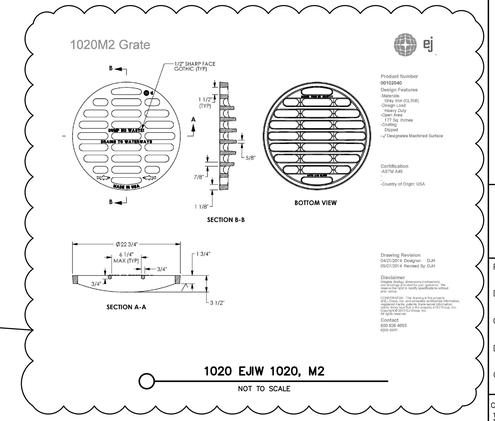


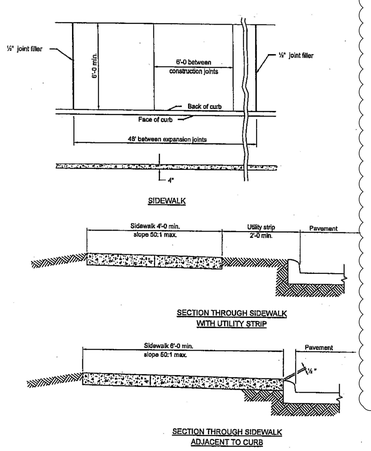


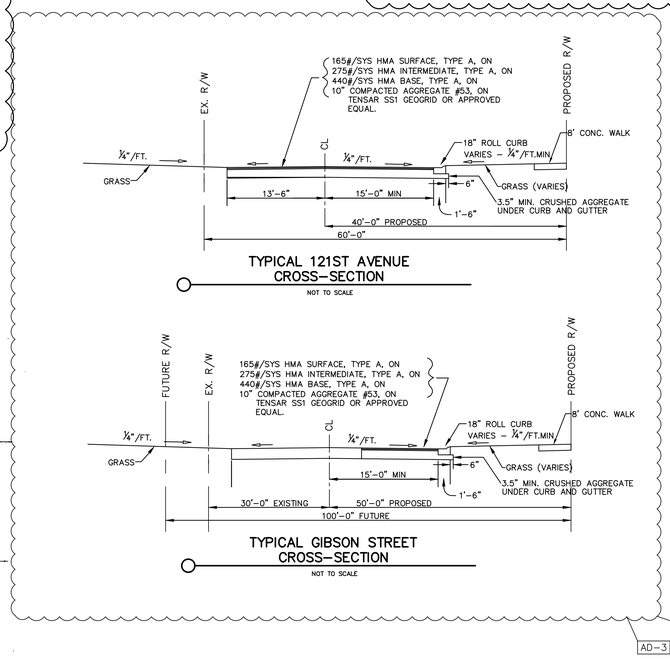


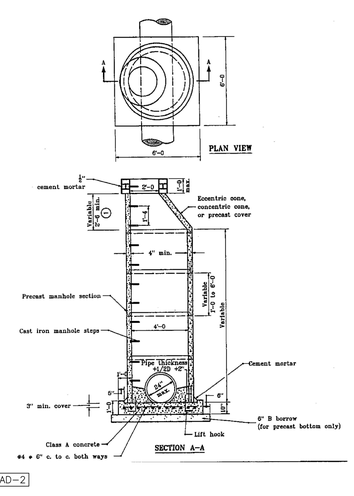


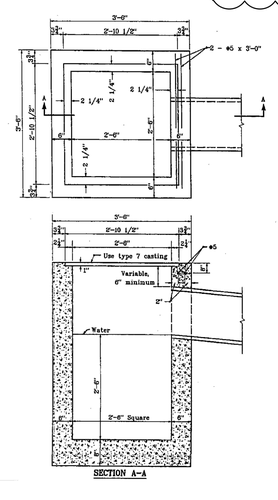


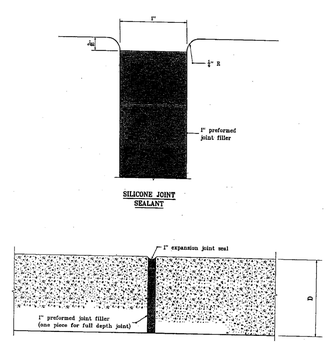












GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

CROWN POINT, INDIANA

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-107
DATE 05/24/21
COORDINATED BY DCT
DRAWN BY DCT EM
CHECKED BY DCT RAT

DONALD C. TORRENCE REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

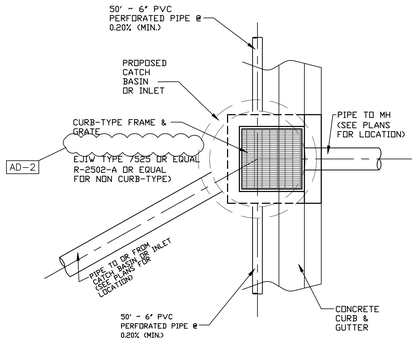
MARK	DATE	ISSUED FOR
AD-2	06/16/2021	ADDENDUM NO. 2
AD-3	06/18/2021	ADDENDUM NO. 3
PR-1	07/20/2021	PR NUMBER 1
PR-24	09/21/2022	PR NUMBER 24

DRAWING
DETAILS & SPECIFICATIONS

PROJECT
NEW MIDDLE SCHOOL

SHEET
C-6.1

Z:\2021-5010 Crown Point Middle School - Winfield\dwg\2021-5010 Details.dwg 12/21/2022 2:23:15 PM CST

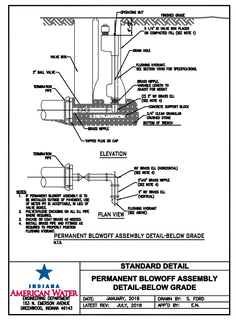


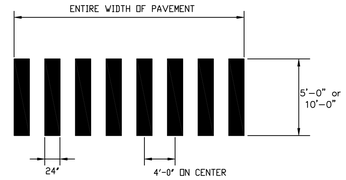
ROADWAY UNDERDRAIN CONNECTION DETAIL

NOT TO SCALE

INSTALL IN ALL PUBLIC RIGHT OF WAYS

AD-2



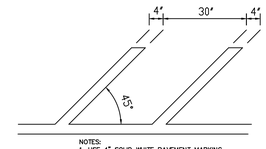


NOTE:
1. ALL REGULATOARY SIGNS SHALL BE HIGH INTENSITY AND IN ACCORDANCE WITH THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, MOST RECENT EDITION.
2. ALL PAVEMENT MARKINGS SHALL BE WHITE THERMOPLASTIC AND SPAN ACROSS APPROACH LANES.

CONTINENTAL CROSS WALK DETAIL

NO SCALE

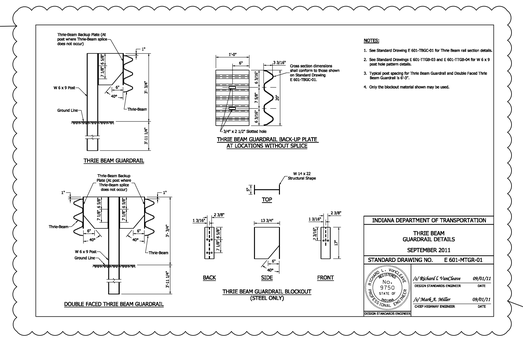
NOT INCLUDED IN THIS BID PACKAGE



NOTES:
1. USE 4" SOLID WHITE PAVEMENT MARKING FOR AISLE/ISLAND AND PEDESTRIAN CROSSING
2. USE 4" SOLID BLUE PAVEMENT MARKING FOR ACCESSIBILITY LOGO AND PARKING

ACCESSIBILITY AND PARKING STRIPING DETAIL

NOT TO SCALE



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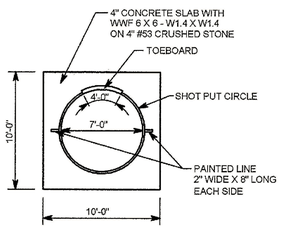

SHOT PUT PAD

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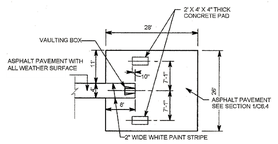
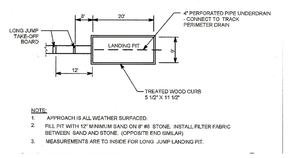


POLE VAULT RUNWAY AND LANDING AREA

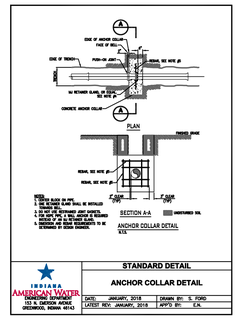
NO SCALE

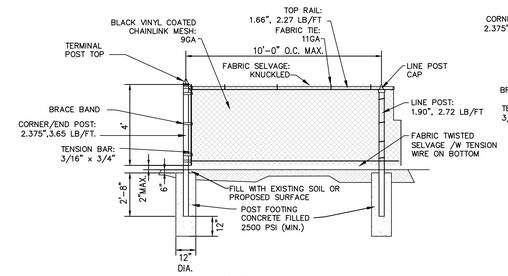


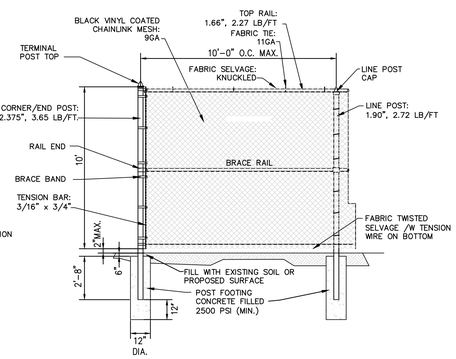
NOTE:
1. APPROACH IS ALL WEATHER SURFACED.
2. FILL PIT WITH 12" MINIMUM SAND ON 6" #8 STONE. INSTALL FILTER FABRIC BETWEEN SAND AND STONE. (OPPOSITE END SIMILAR)
3. MEASUREMENTS ARE TO INSIDE FOR LONG JUMP LANDING PIT.

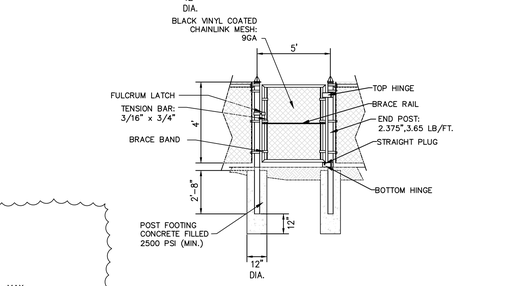
LONG JUMP RUNWAY AND LANDING AREA

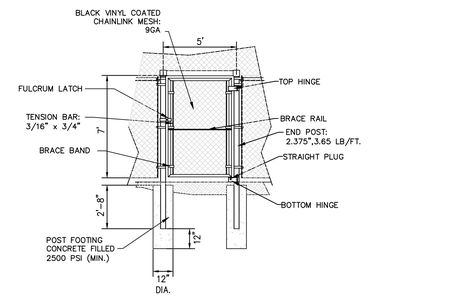
NO SCALE





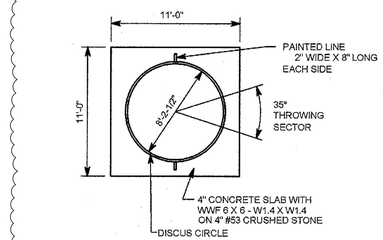






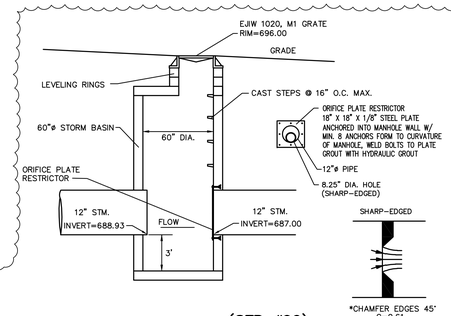
FENCE/GATE DETAIL

NOT TO SCALE



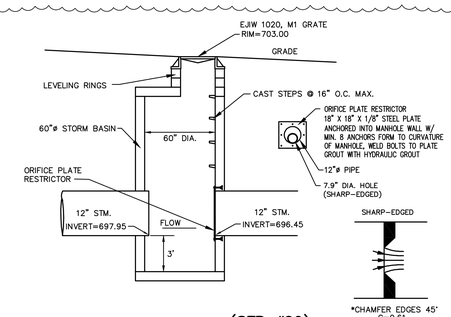
DISCUSS THROW PAD

NOT TO SCALE



(STR #66)
CONTROLLED RELEASE STRUCTURE DETAIL

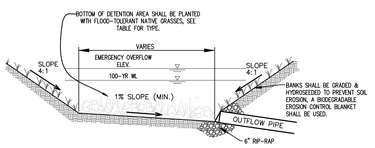
NOT TO SCALE



(STR #69)
CONTROLLED RELEASE STRUCTURE DETAIL

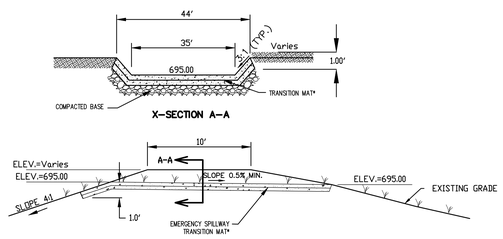
NOT TO SCALE

Low Profile Native Grass	NWL to Limits of Seeding	
Botanical Name	**Common Name**	**lbs/acre**
Andropogon scoparius	Little Blue Stem	20
Bouteloua curtipendula	Side Oat Grama	15
Elymus canadensis	Canada Wild Rye	3
Sporobolus heterolepsis	Prairie Dropseed	1
Agrostis alba	Redtop	5
Perennial Ryegrass		35
Alta Fescue		45
Ky. Bluegrass		20
Creeping Red fescue		10
Slender Wheat Grass		5
Cover Crop		
Annual Ryegrass	Annual Rye	50
Avena sativa	Common Oat	40



DETENTION AREA CROSS-SECTION

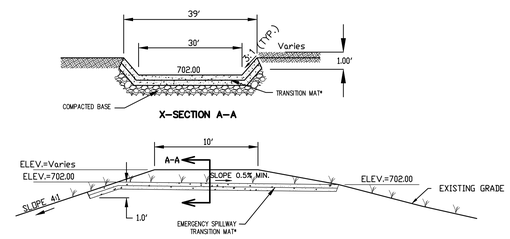
NOT TO SCALE



* A SOIL COVER MUST BE USED UNDER TRANSITION MATS. SOD IS HIGHLY RECOMMENDED AS A MINIMUM ON ALL SLOPES STEEPER THAN 10:1. IN LIEU OF SOD, A COMBINATION TRM/DEOTEXTILE IS PREFERRED, SEE CONSTRUCTION SPECIFICATION DETAILS.

100-YEAR EMERGENCY OVERFLOW SW POND

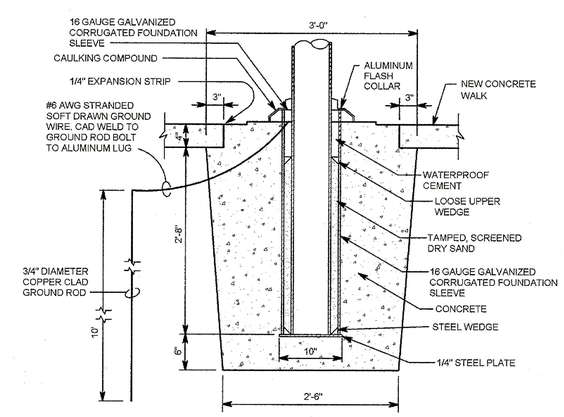
NOT TO SCALE



* A SOIL COVER MUST BE USED UNDER TRANSITION MATS. SOD IS HIGHLY RECOMMENDED AS A MINIMUM ON ALL SLOPES STEEPER THAN 10:1. IN LIEU OF SOD, A COMBINATION TRM/DEOTEXTILE IS PREFERRED, SEE CONSTRUCTION SPECIFICATION DETAILS.

100-YEAR EMERGENCY OVERFLOW SE POND

NOT TO SCALE



FLAG POLE FOUNDATION

NOT TO SCALE

AD-2

NOT INCLUDED IN THIS BID PACKAGE

GIBRALTAR DESIGN
ARCHITECTURE ENGINEERING INTERIOR DESIGN

PROJECT
NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

CROWN POINT, INDIANA

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-107
DATE 05/24/21
COORDINATED BY DCT
DRAWN BY DCT EM
CHECKED BY DCT RAT

DONALD C. TORRENCE REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

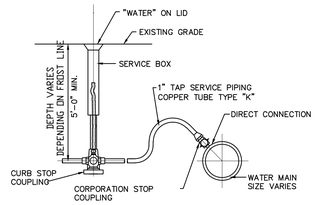
MARK	DATE	ISSUED FOR
AD-2	06/16/2021	ADDENDUM NO. 2
	07-19-2021	Third Submittal to Town
	07-30-2021	Revised Third Submittal to Town
	08-04-2021	Fourth Submittal to Town
	12-21-2021	IAW Approved Revisions

DRAWING
DETAILS & SPECIFICATIONS

PROJECT
NEW MIDDLE SCHOOL

SHEET
C-6.3

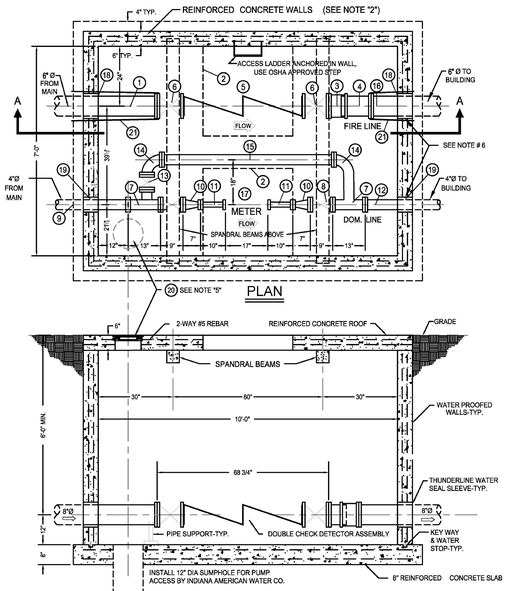
Z:\2021-5010 Crown Point Middle School - Winfield\dwg\2021-5010 Details.dwg 12/21/2022 2:23:15 PM CST



NOTES
1. SEE SPECIFICATIONS FOR SIZE & TYPE OF MATERIALS
2. MAINTAIN 18" VERTICAL & 36" HORIZONTAL SEPARATION BETWEEN SEWER AND WATER SERVICE LINES

TYPICAL WATER TAP SERVICE PIPING (COPPER)

NOT TO SCALE



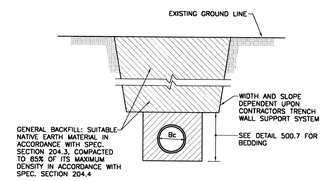
NO.	SIZE	BILL OF MATERIALS	AMT.
1	8"	FLG/PE. C.I. NIPPLE ASA A21.6; AWWA C 106-12-CL#125	1
2	36"x36"	BILCO TYPE J-4AL HATCH W/FLUSH LIFT HANDLE & LOCK DEVICE	2
3	8"	FLG/C.I. DRESSER ADAPTER, CL #125, STYLE 128	1
4	8"	FLG/FLG. NIPPLE ASA A21.6, AWWA C106-62-CL #125	1
5	8"	AMES 3000 DCDA DOUBLE CHECK DETECTOR ASSEMBLY "OR EQUAL"	1
6	8"	FLG/FLG OS&Y GATE VALVE/HW, AWWA, UL & FM ACR	2
7	4"x2"	FLG/FLG C.I. TEE, ANSI A21.10, AWWA C110-CL#125	2
8	4"	FLG/FLG NRS GATE VALVE/HW, AWWA-CL#125	2
9	4"	FLG/PE C.I. NIPPLE ASA A21.6, AWWA-C106-62-CL#125	1
10	4"x 9"	7" LONG REDUCER	2
11	3"	FLG/FLG. NIPPLE ASA A21.6, AWWA C106-62-CL #125	2
12	4"	FLG/PE C.I. NIPPLE ASA A21.6, AWWA C106-12-CL#125	1
13	3"	FLG/FLG NRS GATE VALVE/HW, AWWA-CL#125	2
14	3"	FLG/FLG C.I. 90° ELBOW, ANSI A21.10, AWWA C110-CL#125	2
15	3"	FLG/FLG C.I. NIPPLE ASA A21.6, AWWA C106-62-CL#125	1
16	8"	FLG/PE C.I. NIPPLE ASA A21.6, AWWA C106-12-CL#125	1
17	3"	TRIDENT METER FURNISHED BY UTILITY (17" FLG TO FLG.)	1
18	8"	THUNDERLINE CS-8-6-LS400-C-7 WALL SLEEVE OR EQUAL WATER TIGHT SEAL	2
19	4"	THUNDERLINE CS-4-6-LS400-C-5 WALL SLEEVE OR EQUAL WATER TIGHT SEAL	2
20	-	EAST JORDAN IRON WORKS #1577 MANHOLE COVER	1
21	-	(4) THREADED ROD(S) WELDED W/ GRIPPER RING(S) FOR TIE-BACKS	2 SETS
22	-	(2) THREADED ROD(S) WELDED W/ GRIPPER RINGS OR FIELD LOCK GASKETS	2 SETS

NOTES:
1. AMES 3000 DCDA "OR EQUAL" FURNISHED BY OTHERS. I.N.A.W.C. WILL INSTALL SIDE METER IN BY-PASS ASSEMBLY THAT INCLUDES SHUT-OFF VALVE AND DOUBLE CHECK BACKFLOW PREVENTER. ALL OTHER MATERIALS, PIPING AND VAULT CONNECTION IS BY THE CUSTOMER. A FINAL INSPECTION IS REQUIRED BEFORE THE UTILITY WILL GIVE SERVICE.
2. TIE WALLS TO ROOF WITH #4 CANTILEVER REINFORCEMENT. TIE BACK FITTINGS TO VAULT WALLS WITH TIE-BACK BOLTS.
3. PIPING AND FITTINGS TO CONFORM TO AWWA ANSI STANDARD C800-87 & C151/A21.51 DUCTILE IRON CLASS 51 OR 52 PIPE WITH OUTSIDE COATING AND CEMENT-MORTAR LINING. SUPPORT PIPING AS NEEDED.
4. CENTER ACCESS HATCHES OVER DOUBLE CHECK AND WATER METER.
5. CENTER ACCESS COVER OVER SUMP HOLE.
6. REBAR TO BE SIZED PER ENGINEERING DESIGN.

INDIANA AMERICAN WATER
600 Madison Street, P.O. Box 64689 Gary, Indiana 95401-0485
(219) 885-0340 FAX: (219) 881-3313

TITLE: METER VAULT, 4" DOMESTIC SERVICE & 8" FIRE CONNECTION			
TASK NUMBER(S)	DRAWN BY: CUSH	ATLAS:	
	CHK'D BY: M. RIGBY	FIELD BOOK:	
	DATE: 09/26/95	SCALE: NOT TO SCALE	
	CADD SHEET FILE NUMBER: LGMVALT.DWG		

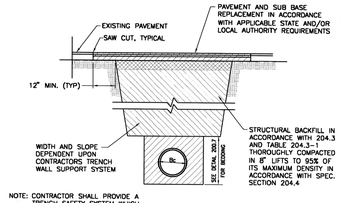
REVISED	DRAWING NO.
07/01/98	
02/04/00	
12/03/10	SHEET OF



TRENCH AND GENERAL BACKFILL DETAIL (TURFED /SEEDED/UNIMPROVED AREAS)

NOT TO SCALE

NOTE:
CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM WHICH CONFORMS TO THE REQUIREMENTS OF SPECIFICATION SECTION 204.1



NOTE: CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM WHICH CONFORMS TO THE REQUIREMENTS OF SPEC. SECTION 204.1

TRENCH AND STRUCTURAL BACKFILL UNDER PAVEMENT DETAIL AND OTHER LOCATIONS*

* IN ACCORDANCE WITH SECTION 204.3 OF THE STANDARDS AND SPECIFICATIONS.

(COMPACTION TESTING REQUIRED IN ACCORDANCE WITH SECTION 204.4 OF THE CURRENT VERSION OF THE INDOT STANDARDS AND SPECIFICATIONS)

NOT TO SCALE

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

CROWN POINT, INDIANA

GIBRALTAR DESIGN
9102 N. Meridian St., Ste. 300
Indianapolis, IN 46260
Homepage www.GibraltarDesign.com
Email info@GibraltarDesign.com
Phone 317.580.5777 Fax 317.580.5778

PROJECT 21-107
DATE 05/24/21
COORDINATED BY DCT
DRAWN BY DCT EM
CHECKED BY DCT RAT

DONALD C. TORRENCE REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

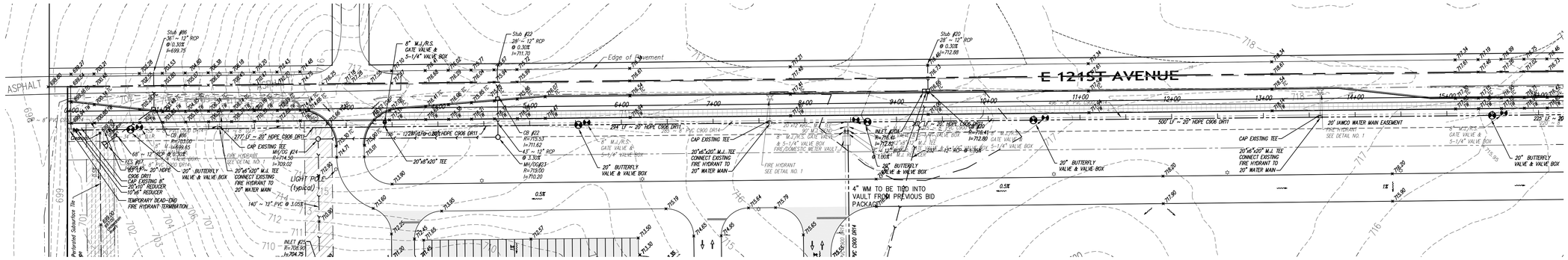
REVISIONS

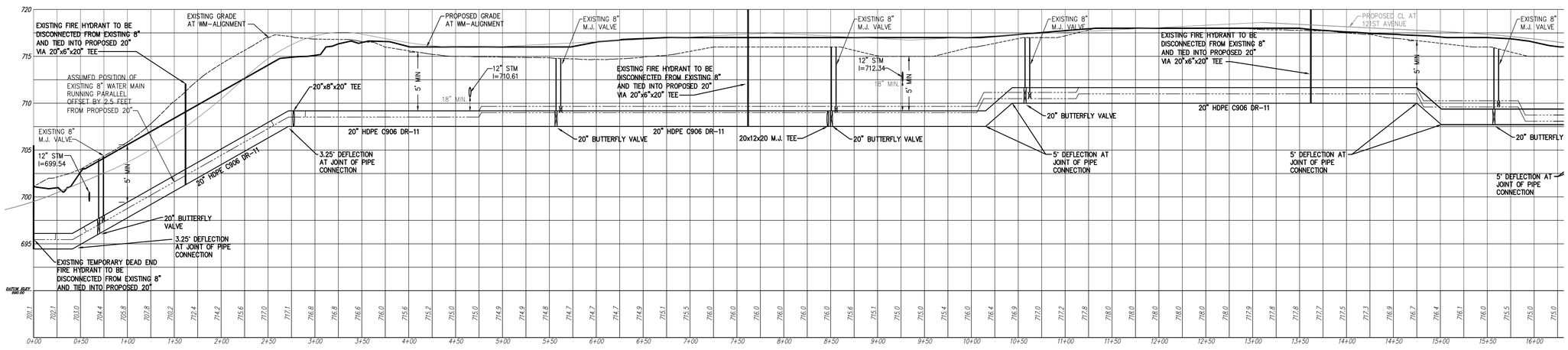
MARK	DATE	ISSUED FOR
	07-19-2021	Third Submittal to Town
	07-30-2021	Revised Third Submittal to Town
	08-04-2021	Fourth Submittal to Town

DRAWING
DETAILS & SPECIFICATIONS

PROJECT
NEW MIDDLE SCHOOL

SHEET
C-6.5





NORTH

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

GIBRALTAR
DESIGN
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PROJECT
21-107

DATE
12/07/22

COORDINATED BY
DCT

DRAWN BY
DCT EM

CHECKED BY
DCT RAT

DONALD C. TORRENCE REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

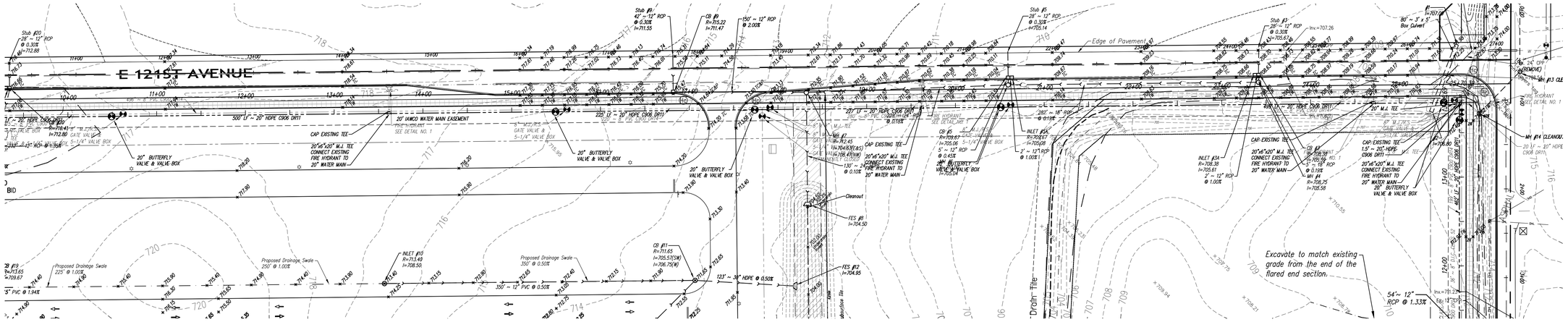
REVISIONS

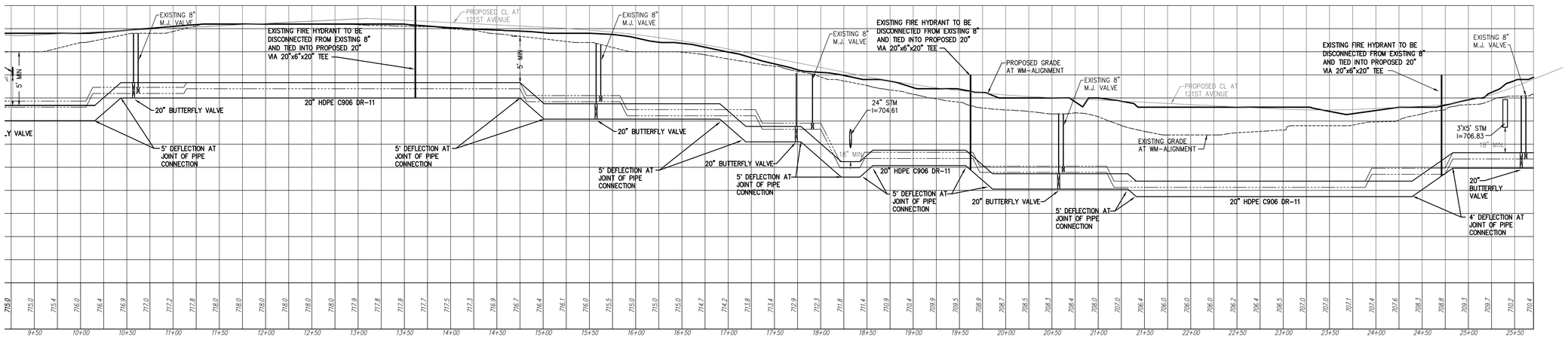
MARK	DATE	ISSUED FOR
	12/07/2022	IAW SUBMITTAL
	12/21/2022	IAW APPROVED REVISIONS

DRAWING
PROFILE - WATER MAIN ON E.121st AVENUE

PROJECT
NEW MIDDLE SCHOOL

SHEET
C-8.4





NORTH

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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GIBRALTAR DESIGN
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PROJECT
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CROWN POINT COMMUNITY SCHOOL CORPORATION

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DONALD C. TORRENCE REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

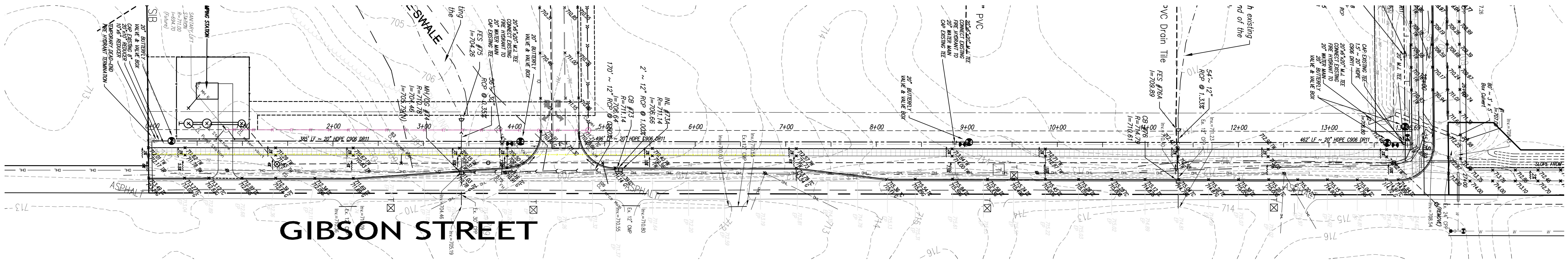
REVISIONS

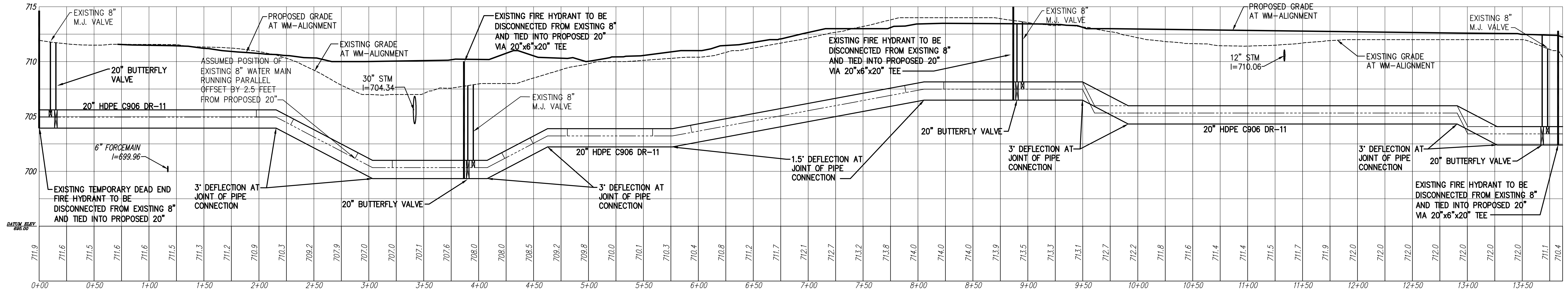
MARK	DATE	ISSUED FOR
	12/07/2022	IAW SUBMITTAL
	12/21/2022	IAW APPROVED REVISIONS

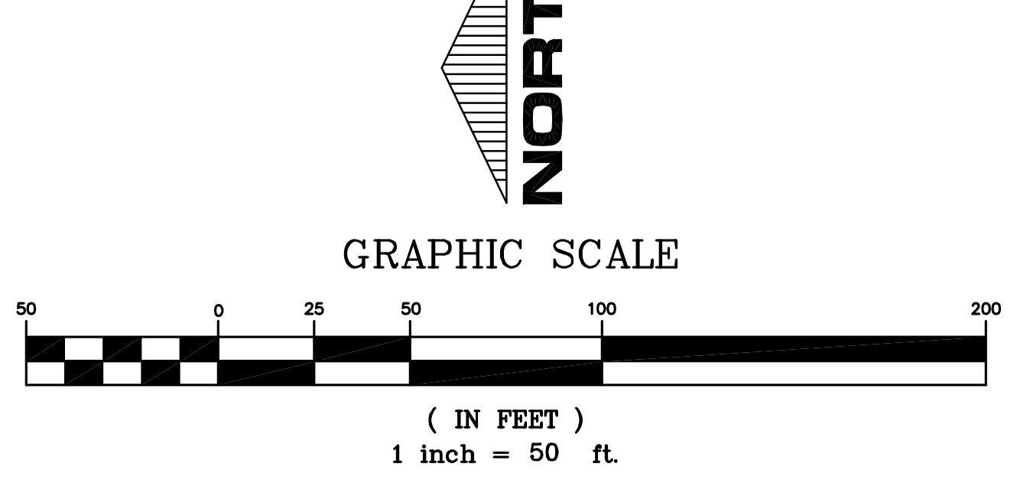
DRAWING
PROFILE - WATER MAIN ON E.121st AVENUE

PROJECT
NEW MIDDLE SCHOOL

SHEET
C-8.5







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GIBRALTAR
DESIGN
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PROJECT
NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

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21-107
DATE
12/07/22
COORDINATED BY
DCT
DRAWN BY
DCT EM
CHECKED BY
DCT RAT

DONALD C. TORRENGA
No. 19868

Donald C. Torrenga

REVISIONS

MARK	DATE	ISSUED FOR
	12/07/2022	IAW SUBMITTAL
	12/21/2022	IAW APPROVED REVISIONS

DRAWING
PROFILE - WATER MAIN ON GIBSON STREET

PROJECT
NEW MIDDLE SCHOOL

SHEET
C-8.6

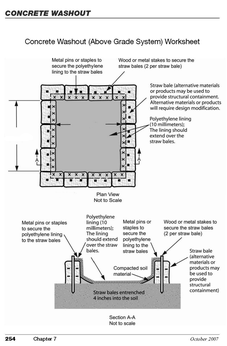
CONCRETE WASHOUT

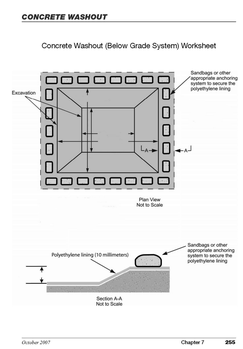
Purpose: To reduce the discharge of pollutants associated with concrete waste through consolidation of solids and retention of liquids.

Requirements:
1.) Locate concrete washout systems at least 50 feet from any creeks, wetlands, ditches, karst features, or storm drains/manmade conveyance systems.
2.) Locate concrete washout systems in relatively flat areas with established vegetative cover and do not receive runoff from adjacent land areas.
3.) Locate in areas that provide easy access for concrete trucks and other construction equipment.
4.) Locate away from other construction traffic to reduce the potential for damage to the system.
5.) Minimum of ten millimeter polyethylene sheeting that is free of holes, tears, and other defects. The sheeting selected should be of an appropriate size to fit the washout system without seams or overlap of the lining.
6.) Signage.
7.) Orange safety fencing or equivalent.
8.) Straw bales, sandbags (bags should be ultraviolet-stabilized geotextile fabric), soil material, or other appropriate materials that can be used to construct a containment system (above grade systems).

Installation:
1.) Dependent upon the type of system, either excavate the pit or install the containment system.
2.) A base shall be constructed and prepared that is free of rocks and other debris that may cause tears or punctures in the polyethylene lining.
3.) Install the polyethylene lining. For excavated systems, the lining should extend over the entire excavation. The lining for bermed systems should be installed over the pooling area with enough material to extend the lining over the berm or containment system. The lining should be secured with pins, staples, or other fasteners.
4.) Place flags, safety fencing, or equivalent to provide a barrier to construction equipment and other traffic.
5.) Place a non-collapsing, non-water holding cover over the washout facility prior to a predicted rainfall event to prevent accumulation of water and possible overflow of the system (optional).
6.) Install signage that identifies concrete washout areas.
7.) Post signs directing contractors and suppliers to designated locations.

Maintenance:
1.) Inspect daily and after each storm event.
2.) Inspect the integrity of the overall structure including, where applicable, the containment system.
3.) Inspect the system for leaks, spills, and tracking of soil by equipment.
4.) Inspect the polyethylene lining for failure, including tears and punctures.
5.) Once concrete wastes harden, remove and dispose of the material.
6.) Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean the structure. Prefabricated systems should also utilize this criterion, unless the manufacturer has alternate specifications.
7.) Upon removal of the solids, inspect the structure. Repair the structure as needed or construct a new system.
8.) Dispose of all concrete in a legal manner. Reuse the material on site, recycle, or haul the material to an approved construction/demolition landfill site. Recycling of material is encouraged. The waste material can be used for multiple applications including but not limited to roadbeds and building. The availability for recycling should be checked locally.
9.) The plastic liner should be replaced after every cleaning; the removal of material will usually damage the lining.
10.) The concrete washout system should be repaired or enlarged as necessary to maintain capacity for concrete waste.
11.) Concrete washout systems are designed to promote evaporation. However, if the liquids do not evaporate and the system is near capacity it may be necessary to vacuum or remove the liquids and dispose of them in an acceptable method. Disposal may be allowed at the local sanitary sewer authority provided their National Pollutant Discharge Elimination System permits allow for acceptance of this material. Another option would be to utilize a secondary containment system or basin for further dewatering.
12.) Prefabricated units are often pumped and the company supplying the unit provides this service.
13.) Inspect construction activities on a regular basis to ensure suppliers, contractors, and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify the violators and take appropriate action.
14.) When concrete washout systems are no longer required, the concrete washout systems shall be closed. Dispose of all hardened concrete and other materials used to construct the system.
15.) Holes, depressions and other land disturbances associated with the system should be backfilled, graded, and stabilized.





TOPSOIL SALVAGE & UTILIZATION

Purpose: To provide a method of preserving topsoil for use in establishing vegetation to achieve final site stabilization.

Specifications:
Material
Typically the darker, friable, loamy surface layer of soil found immediately below vegetation.

Storage Area
1. Free of stumps, rock, and construction debris.
2. Stockpile covered with vegetation or a tarp.
3. Surrounded by a sediment barrier or sediment filter.
4. Stockpile outside rooting zone of trees to be protected.

Application:
Salvaging and Stockpiling Topsoil
1. Determine depth and suitability of topsoil at site.
2. Prior to stripping topsoil, install any site-specific down slope measures needed to control storm water runoff and sedimentation.
3. Remove soil material no deeper than the "surface soil".
4. Stockpile the material in accessible locations that will not interfere with other construction activities or block drainage.
5. Stockpiled soil should be temporarily seeded and surrounded by a sediment control measure.

Spreading Topsoil
1. Prior to applying topsoil, grade the subsoil and roughen the top three to four inches by disking.
2. Apply topsoil evenly to a depth of a minimum of four inches, then compact slightly to improve contact with the subsoil.
3. Do not apply topsoil when the site is wet, muddy, or frozen.
4. After spreading the topsoil, grade and stabilize the site.

Maintenance:
1. Inspect daily.
2. Check for damage to perimeter barrier; repair immediately.
3. Check for erosion or damage to newly spread topsoil; repair immediately and revegetate.

STREET AND PARKING LOT SWEEPING

Purpose: To reduce the amount of pollutants that get washed into the storm drain and ultimately transported and deposited in waterbodies.

Application:
1. Sweeping at points of egress where sediment is tracked from project site onto public or private streets and roads.

Limitations:
1. Sweeping may be ineffective if soil is wet or heavy accumulation of mud.
2. May require repeat cleanings.

Maintenance:
1. Inspect potential sediment tracking ingress and egress points locations daily, and after rain events.
2. Visible sediment observed outside the construction limits shall be swept and removed daily.
3. Do not use kick brooms or sweeper attachments. These tend to spread the dirt rather than remove it.
4. If not mixed with debris or trash, consider incorporating the removed sediment back into the project.
5. Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
6. Adjust brooms frequently; maximize efficiency of sweeping operations.
7. After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite.

INLET FILTER BASKET PROTECTION

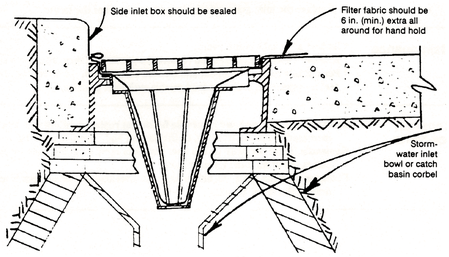
Purpose: To prevent excessive sediment from entering storm sewers at curb inlets, allowing full use of the storm drain system during the construction period.

Requirements: (At owner's discretion either a Basket type or Sack type may be ussed.)
Basket type: Fabricated metal with top width-length dimensions such that the basket fits into the inlet without gaps, and line it with geotextile fabric for filtration, Marathon Materials, Inc. Catch-All inlet protectors or approved equal.

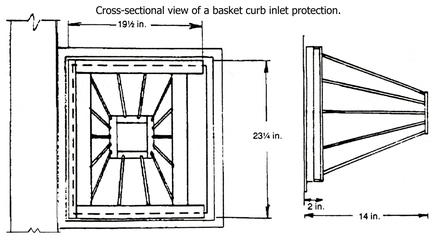
Sack type: Open-top geotextile fabric underneath a storm grate, for flat grate and mountable curb inlet Mirafi Dandy Curb Sack or Dandy Sack or approved equal.

Installation:
1. Install basket curb inlet protections as soon as inlet boxes are installed in a new development or before land disturbing activities begin in a stabilized area.
2. Remove the grate, and place the basket in the inlet.
3. Cut and install a piece of filter fabric large enough to line the inside of the basket and extend at least 6 in. beyond the frame.
4. Replace the inlet grate, which also serves to anchor the fabric.

Maintenance:
1. Inspect after each storm event
2. Remove built-up sediment and replace the Geotextile fabric after each storm event.



Cross-sectional view of a basket curb inlet protection.



Top view (left) and front view (right) of a basket curb inlet protection.

SILT FENCE

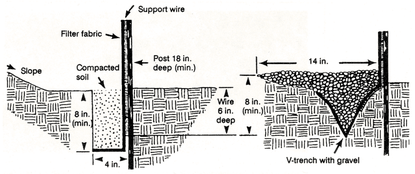
Purpose: To retain sediment from small sloping disturbed areas by reducing the velocity of sheet flow.

Requirements:

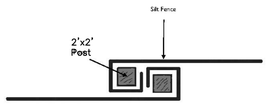
Trench:	8" minimum depth, flat bottom or v-shaped, filled with compacted soil or gravel to bury lower portion of support wire and/or fence fabric.
Support posts:	2" x 2" hardwood posts set at lease 1 foot deep.
Spacing of Posts:	8-foot maximum if fence supported by wire, otherwise 6 foot for extra strength fabric without wire backing.
Fence height:	A 3 feet minimum or high enough so depth of impounded water does not exceed 1.5 feet at any point along fence line.
Support wire : (optional)	14 gauge, 6" mesh wire fence. (needed if using standard-strength fabric
Fence Fabric:	Woven or non-woven Geotextile fabric with specified filtering efficiency and tensile strength and containing UV inhibitors and stabilizers to ensure 6 months minimum life at temperatures 0-120 degrees F.

Installation:
1. Along the entire intended fence line, maintain contour as much as possible, dig an 8" deep flat bottom or v-shaped trench.
2. On the downslope side of the trench, drive the post at least 1 foot into the ground. (Note: If the fence has pre-attached posts or stakes, drive them deep enough so the fabric is satisfactorily in the trench per step 6)
3. Fasten support wire fence to the upslope side of the posts, extending it 8" into trench. (use only if required by manufacturer)
4. Run a continuous length of Geotextile fabric along upslope side of posts.
5. If a joint is necessary, nail the overlap to the nearest post with a wood lath.
6. Place the bottom 1' of fabric in the 8" deep trench, extending the remaining 4" of fabric toward the upslope side.
7. Backfill the trench with compacted earth.

Maintenance:
1. Inspect silt fence periodically and after each storm event.
2. If fence fabric tears, starts to decompose, or becomes ineffective, replace the affected portion.
3. Remove deposited sediment when it reaches half the height of the fence at its lowest point or is causing the fabric to bulge.
4. Take care to avoid undermining the fence during clean out.
5. After watershed has been stabilized, remove fence and sediment deposits, bring the disturbed area to grade and stabilize.



Detailed example of silt fence installation (showing flat-bottom and v-shaped trenches).



Silt Fence Wrap Joint Detail

GRASS LINED CHANNEL

Purpose: To carry concentrated runoff from a small watershed area to a stable outlet without damage from erosion or flooding.

Requirements:
See Vegetated Swale Detail (Sheet C-6.2)

Seed:

Turf type tall fescue	300-350 lbs/acre
Wheat	1/2 bushel/acre

Fertilizer:
Fertilize according to soil test. If testing is not done, use 600 lbs./acre of 12-12-12 analysis or equivalent fertilizer.

Erosion Control Blanket:
North American Green or equal

Installation:
1. Remove all vegetation, brush, trees and other debris from the channel area and dispose of property.
2. Excavate and shape the channel to dimensions shown on the plans, dispose of excess soil so surface can enter the channel freely.
3. Add topsoil where the soils exposed during excavation would be unsuitable for grass species.
4. Till the soil to obtain uniform seedbed, working the fertilizer into the soil.
5. Sod or apply seed uniformly with a drill or cultipacker-seeder or by broadcasting, and cover to a depth of 1/4 inch.
6. Blanket sides and bottom of channel with Erosion Control Blanket North American Green or equal.

Maintenance:
1. Inspect the channel following storm events during and after vegetative establishment, repair and reseed as needed.
2. Check the channel outlet for blockage, sediment and make repairs.
3. Remove significant sediment and debris from the channel to maintain design cross section and grade.

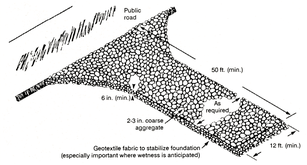
TEMPORARY CONSTRUCTION ENTRANCE/EXIT

Purpose: To provide a stable entrance/exit condition from the construction site, and to keep mud and sediment off public roads.

"GRAVEL"
Requirements:
Width: 20 feet minimum or full width of entrance
Length: 150 feet minimum
Material: 2-3 inch diameter washed stone (INDOT CA No. 2), with Geotextile Fabric Underliner.
Thickness: 8 inch minimum

Installation:
1. Remove all vegetation and other objectionable material from the foundation area.
2. Install pipe under the stone if needed to provide proper public road drainage.
3. Install Geotextile fabric on the graded foundation area prior to stone placement.
4. Divert all surface runoff and drainage from the stone to sediment trap.

Maintenance:
1. Inspect entrance pad for sediment deposits weekly and after storm events or heavy use.
2. Reshape pad as needed for drainage and runoff control.
3. Topdress with clean stone as needed.
4. Remove mud and sediment tracked or washed onto public road by brushing or sweeping. No flushing of sediment off the street
5. Repair any broken road pavement immediately.

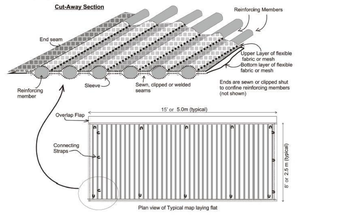


Plans of a temporary gravel construction entrance/exit pad.

"MAT"
Requirements:
Width: 12 feet minimum or full width of entrance
Length: 50 feet minimum
Material: Geotextile-Type mats, **AGES Mud Mat** or approved equal

Installation:
1. Install pipe under mat if needed to provide proper site drainage.
2. Install Geotextile-Type mat on the graded foundation area.
3. Divert all surface runoff and drainage from the mat to sediment trap.

Maintenance:
1. Inspect entrance mat for sediment deposits weekly and after storm of a minimum of 1/2 inch rainfall events or heavy use.
2. Reshape pad as needed for drainage and runoff control.
3. Repair or replace mats as needed.
4. Remove mud and sediment tracked or washed onto public road by brushing or sweeping. No flushing of sediment off the street.



PLANS OF TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD

ROCK CHUTE

Purpose: To protect slopes, stream banks and channels, which are subject to erosion. Where run off velocity is great, at the outlet pipe of a detention basin, channel or culvert.

Requirements:
Rock: Hard angular, weather-resistant and well graded stone, the largest pieces should not exceed two times the specified stone diameter.

Thickness: 12" minimum or two times the specified stone diameter, which ever is greater.

Filter: Under permanent riprap install geotextile fabric for stabilization and filtration

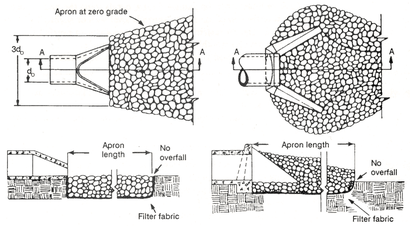
Installation:
Subgrade Replacement:
1. Remove brush, trees, stumps, and other debris.
2. Excavate only deep enough for both filter and riprap.

Filter Placement:
1. Place geotextile fabric on a smoothed foundation, overlap the edges at least 12 inches and secure with anchor pins spaced every 3 feet along the overlap.
2. If fabric is damaged, remove the riprap and repair damaged area by 12 inches.

RipRap Replacement:
1. Immediately after installing the filter, add the riprap to full thickness in one operation to the design elevation, and extend riprap to the top of the bank.
2. Place smaller rock in voids to form a dense, uniform, well-graded mass.
3. Blend the riprap smoothly to the surrounding grade.
4. Stabilize all disturbed areas immediately following installation.

Maintenance:
1. Inspect periodically for displaced rock material, slumping, and erosion at edges, especially down stream or down slope.

Note:
1. At owner's discretion, oulet protection & grade stabilization Scour Stop TM may be substituted for this practice.



Pipe outlet aprons for a channel (left) that is not well defined and (right) that is well defined.

SELF-MONITORING PROGRAM

A self-monitoring program that includes the following must be implemented at all permitted project sites:

1. A trained individual shall perform a written evaluation of the project site a minimum of one (1) time per week and by the end of the next business day following each measurable storm event.
2. The evaluation must address the maintenance of existing storm water quality measures to ensure they are functioning properly and identify additional measures necessary to remain in compliance with all applicable statutes and rules.
3. Written evaluation reports must include:
   a. the name of individual performing the evaluation;
   b. the date of evaluation;
   c. problems identified at the project site; and
   d. details of corrective actions recommended and completed.
4. All evaluation reports for the project site must be made available to the MS4 Operator or other designated entity within forty-eight (48) hours of a request.
5. Evaluation reports must be maintained for a period of two (2) years from date of NOT.
6. All evaluation reports will be submitted to the Town of Cedar Lake when requested.

Date: _____
Project: _____
Inspected by: _____
Type of Inspection: Scheduled/Weekly Rain Event

CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG
(To be Completed by Property Owner or Agent)

All stormwater pollution prevention BMPs shall be inspected and maintained as needed to ensure continued performance of their intended function during construction and shall continue until the entire site has been stabilized and a Notice of Termination has been issued. An inspection of the project site must be completed by the end of the next business day following each measurable storm event. If there are no measurable storm events within a given week, the site should be monitored at least once in that week. Maintenance and repair shall be conducted in accordance with the accepted site plans. This log shall be kept as a permanent record and must be made available to City of Crown Point City Engineer, in an organized fashion, within forty-eight (48) hours upon request.

Yes	No	N/A	
			1. Are all sediment control barriers, inlet protection and silt fences in place and functioning properly?
			2. Are all erodible slopes protected from erosion through the implementation of acceptable soil stabilization practices?
			3. Are all dewatering structures functioning properly?
			4. Are all discharge points free of any noticeable pollutant discharges?
			5. Are all discharge points free of any noticeable erosion or sediment transport?
			6. Are designated equipment washout areas properly sited, clearly marked, and being utilized?
			7. Are construction staging and parking areas restricted to areas designated as such on the plans?
			8. Are temporary soil stockpiles in approved areas and properly protected?
			9. Are construction entrances properly installed and being used and maintained?
			10. Are "Do Not Disturb" areas designated on plan sheets clearly marked on-site and avoided?
			11. Are public roads at intersections with site access roads being kept clear of sediment, debris, and mud?
			12. Is spill response equipment on-site, logically located, and easily accessed in an emergency?
			13. Are emergency response procedures and contact information clearly posted?
			14. Is solid waste properly contained?
			15. Is a stable access provided to the solid waste storage and pick-up area?
			16. Are hazardous materials, waste or otherwise, being properly handled and stored?
			17. Have previously recommended corrective actions been implemented?

If you answered "no" to any of the above questions, describe any corrective action which must be taken to remedy the problem and when the corrective actions are to be completed.

_____
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REPORT SAMPLE

SPILL PREVENTION AND RESPONSE

Purpose: Procedures and practices to prevent and control spills in a manner that minimizes or eliminates the discharge of spilled material to the drainage system or watercourses.

Hazardous Waste Products:
- Petroleum Products,
- Asphalt Products,
- Concrete Curing Compounds,
- Pesticides,
- Acids,
- Paints,
- Stains,
- Solvents,
- Wood Preservatives,
- Roofing Tar, or

Other Waste Products:
- Soil stabilizers/binders
- Dust palliatives
- Herbicides
- Growth inhibitors
- Fertilizers
- Deicing/anti-icing chemicals
- Fuels
- Lubricants
- Other petroleum distillates

Any materials deemed a hazardous waste in 40 CFR Parts 110, 117, 261, or 302

Spill Prevention Practices:
The following are management practices used for reduction of spills and other accidental exposure of materials and substances to storm water runoff:
a. The contractors and subcontractors shall refer to the Material Safety Data Sheet (MSDS) for information on the proper storage, use, and clean-up methods for all materials anticipated being on the project site.
b. All required materials for spill clean up and disposal of all onsite materials shall be kept on site in a project trailer with easy access for all users of associated materials.
c. All disposals of spilled materials shall be done in accordance with Federal, State and Local waste disposal regulations. All contractors and subcontractors shall be responsible for any and all spills associated with their work.
d. Prompt cleanup of any spills that may occur of liquid or dry materials.
e. Cleanup of sediments that have been tracked by vehicles or have been transported by wind or storm water about the site or onto nearby roadways.

Response Practices:
In the event that a large spill occurs (that which requires extensive cleanup actions, refer to MSD sheets for information), the following procedures shall be followed to minimize exposure of the material.

a. Immediate action shall be taken to control and contain the spill to prevent it from entering any nearby storm sewer structures or open waters.
b. Notify the Town of Winfield Fire Department at 911 for all combustible and flammable materials.
c. Notify the Federal Emergency Spill Hotline at 1-800-424-8802 within 2 hours for spills above the reported allowable quantity, or if the material enters any nearby storm sewer structures or open waters.
d. Notify the Indiana Emergency Response Hotline at 1-888-233-7745.
e. The spill area shall be isolated from all surrounding areas with absorbent pads, booms, and pillows designed for the use of spill containment and absorption.
f. The spill kits that are required to be on site shall be utilized.
g. Emergency Response teams shall be contacted for extensive spills above and beyond the containment by available methods.

Waste Disposal Management Practices:
All solid waste associated with the construction and development of this project shall be removed and disposed of properly with in all applicable state and federal laws associated with the waste generated. Developer and/or contractor are to provide on-site dumpsters, rented from a licensed solid waste management company, to ensure waste is collected and disposed of properly. All trash and construction debris from the site will be deposited in a dumpster. No construction waste will be buried onsite. All personnel will be instructed regarding the correct procedure for waste disposal.

a. Select a designated waste collection area onsite.
b. Provide an adequate number of containers with lids or covers throughout the site, and frequent pickups
c. Provide immediate cleanup of any container spills.
d. Make sure that construction waste is collected, removed, and disposed of only at authorized areas.

GIBRALTAR DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

PROJECT
NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

CROWN POINT, INDIANA

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PROJECT 21-107
DATE 05/24/21
COORDINATED BY DCT
DRAWN BY DCT EM
CHECKED BY DCT RAT

DONALD C. TORRENCE REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

MARK	DATE	ISSUED FOR

DRAWING
STORM WATER POLLUTION PREVENTION PLAN DETAILS

PROJECT
NEW MIDDLE SCHOOL

SHEET
C-9.0

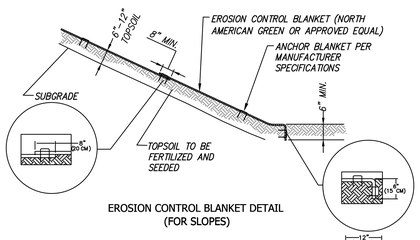
EROSION CONTROL BLANKET (SURFACE-APPLIED)

Purpose: To prevent erosion by protecting the soil from rainfall impact, overland water flow, concentrated runoff, or wind.
To conserve moisture and increase seed germination and seedling growth.

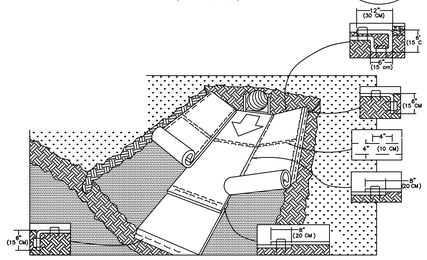
Requirements:
Material: Either an organic (straw, excelsior, woven paper, coconut, fiber, etc.) or a synthetic mulch incorporated into a polypropylene or similar netting material. It may be biodegradable, photodegradable or permanent. **North American Green** or approved equal.
Anchoring: Use of staples or stakes to prevent movement of displacement.

Installation:
1. Grade the site as specified in the construction plan.
2. Add topsoil where appropriate.
3. Prepare the seedbed, fertilize and seed the area immediately after grading.
4. Following manufacture's directions, lay the blankets on the seeded area such that they are in continuous contact with the soil and that the upslope or upstream ones overlap the lower ones by at least 8 inches.
5. Tuck the uppermost edge of the upper blankets into a check slot (slit trench), backfill with the soil, and tamp down.
6. Anchor the blankets as specified by the manufacturer by driving 6-8 in. metal staples into the ground in a pattern determined by the site conditions.

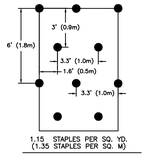
Maintenance:
1. During vegetative establishment, inspect after storm events for any erosion below the blanket.
2. If any area shows erosion, pull back that portion of the blanket covering it, add soil, re-seed the area, and re-lay and staple the blanket.
3. After vegetative establishment, check the treated area periodically.



EROSION CONTROL BLANKET DETAIL
(FOR SLOPES)



EROSION CONTROL BLANKET DETAIL
(DRAINAGE CHANNEL)



STAPLE PATTERN DETAIL

DORMANT AND FROST SEEDING

Purpose:
1. To provide early germination and soil stabilization in the spring.
2. To reduce sediment runoff to downstream areas.
3. To repair previous seedings.

Requirements:
Site and seedbed preparation: Graded, lime and fertilizer applied.

Seed Selected:
Selected on the basis of Site Conditions, Soil PH, intended land use, and expected level of maintenance. See Table for dormant or frost seeding recommendations.

Fertilize: According to soil test or use 400-600 lbs/acre 12-12-12 analysis or equivalent.

Application:
Dormant seeding is a temporary or permanent seeding application at a time when soil temperatures are too low for germination to occur (less than 50 °F) Frost seeding is a temporary or permanent seeding application in early spring when soils are in the freeze-thaw stage.

For Dormant Seeding: (Seeding dates: Dec. 1-Feb. 28)
1. Site preparation and mulching can be done months ahead of actual seeding, apply mulch upon completion of grading (Practice 3.15)
2. Broadcast fertilizer as recommended by soil test.
3. Broadcast seeding on top of the mulch and/or into existing ground cover at the rate shown on table. (if site preparation occurs within the recommended dates, fertilize and lime, seed, and mulch at the time.)

For Frost Seeding: (Seeding dates: Feb. 28 - Mar. 28)
1. Broadcast fertilizer as recommended by a soil test.
2. Select an appropriate seed species or mixture from table for temporary seeding or table for permanent seeding, and broadcast on to the seedbed or into the existing ground cover at the rate shown. (Do not work the seed into the soil.)

Maintenance:
1. Apply 200-300 lbs./acre of 12-12-12 or equivalent fertilizer between Apr. 15 and May 10 or during periods of vigorous growth.
2. Re-seed and mulch any areas that have inadequate cover by mid- to late April. For best results, re-seed within the recommended dates shown for temporary seeding or for permanent seeding.

Temporary Dormant or Frost Seeding Recommendations.

Seed species*	Rate per acre
Wheat or rye	150 lbs.
Spring oats	150 lbs.
Annual ryegrass	60 lbs.

*Perennial species may be used as temporary cover, especially if the area to be seeded will remain idle for more than a year.

MULCHING

Purpose: To promote seed germination and seedling growth, a temporary surface stabilization, and protecting the soil from wind and water impact.

Requirements:
Material: Straw, hay, wood fiber or excelsior, see table for Mulch Materials, Rates, and comments.
Comments:
Coverage: 75% of the soil surface
Anchoring: Required to prevent displacement by wind or water, see table for Mulch Anchoring Methods.

Application:
1. Apply mulch at the recommended rate.
2. Spread uniformly by hand, hay fork, mulch blower, or hydromulcher with no more than 25% of the surface visible.
3. Anchor immediately if using straw or hay, using one of the folliwing methods:
   - Crimp with mulch anchoring tool.
   - Hydromulch with short cellulose fibers.
   - Apply liquid tackifier.
   - Cover with netting secured with metal staples..

Maintenance:
1. Inspect after storm events to check for movement of mulch or for erosion.
2. If washout, breakage, or erosion is present, repair the surface, then re-seed, re-mulch.
3. Continue inspections until vegetation is firmly established.

Exhibit 3.15-B. Mulch Materials, Rates, and Comments.

Material	Rate	Comments
Straw or hay	1½-2 tons/acre	Should be dry, unchopped, free of undesirable seeds. Spread by hand or machine. Must be crimped or anchored (see *Exhibit 3.15-D*).
Wood fiber or cellulose	1 ton /acre	Apply with a hydromulcher and use with tacking agent.
Long fiber wood (excelsior)	1/2-3/4 ton/acre	Anchor in areas subject to wind.

Exhibit 3.15-D. Mulch Anchoring Methods.

Anchoring method	How to apply
Mulch anchoring tool OR Farm disk (dull, serrated, and set straight)	Crimp or punch the straw or hay into the soil 2-4 in. Operate machinery on the contour of the slope.
Cleating with dozer tracks	Operate dozer up and down slope, not across, or else the tracks will form rills.
Wood hydromulch fibers	Apply 1-2 tons/acre using a hydromulcher at a rate of 750 lbs./acre with a tacking agent (or according to contractor specifications). Do not use in areas of concentrated flow.
Asphalt emulsion	Emulsified asphalt should conform to the requirements of ASTM Spec. #977. Apply with suitable equipment at a rate of 0.05 gal./sq. yd. Do not use in areas of concentrated flow.
Synthetic tackifier, binder or soil stabilizer	Apply according to manufacturer's recommendation.
Biodegradable netting (polypropylene or similar material)*	Apply over mulch and staple with 6-8 in. wire staples. Follow manufacturer's recommendations for installation. Best suited to slope application.

* Install the netting immediately after applying the mulch. In areas of concentrated water flow, lay it parallel to the direction of flow; on other slopes, lay it either parallel or perpendicular to direction of flow. Edges of adjacent netting strips should overlap 4-6 in., with the strip on the upgrade side of any lateral water flow on top. Installation details are site specific, so follow manufacturer's directions.

PERMANENT SEEDING

Purpose: To stabilize disturbed areas especially along both sided of the streets and courts after final grading work is completed and where additional work is not scheduled.

Requirements:
Site and seedbed preparation: Graded, and lime and fertilizer applied.

Seed Selected:
Selected on the basis of Site Conditions, Soil PH, intended land use, and expected level of maintenance see Table for permanent seeding recommendations.

Fertilize: According to soil test or use 600 lbs/acre 12-12-12 analysis or equivalent.

Mulch: 1.5 - 2 tons/acre straw. Straw must be dry, unchopped and free of undesirable seeds.

Application:
1. Fertilize and line as recommended by soil test.
2. Till the soil to obtain a uniform seedbed, working the fertilizer and lime into the soil 2-4" deep with a disk or rake operated across the slope.
3. Apply seed uniformly with a drill or cultipacker-seeder, or broadcasting, and cover to a depth of ¼ to ½ inch.
4. If drilling or broadcasting, firm the seedbed with a roller or cultipacker.
5. Mulch all seeded areas. (Note: If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.)

Maintenance:
1. Inspect periodically, especially after storm events, until the stand is successfully established. (Characteristics of a successful stand include: vigorous dark green or bluish-green seedling; uniform density with nurse plants, legumes, and grasses well intermixed; green leaves; and the perennials remaining green throughout the summer, at least at the plant base.)
2. Plan to add fertilizer the following seasons according to soil test recommendations.
3. Repair damaged, bare or sparse areas by filling any gullies, refertilizing, over- or re-seeding, and mulching.
4. If plant cover is sparse or patchy, review the plant materials chosen, soil fertility, moisture condition, and mulching; then repair the affected area either by over-seeding or by re-seeding, and mulching.
5. If vegetation fails to grow, consider soil testing to determine acidity or nutrient deficiency problems. (Contact your SWCD or Cooperative Extension office for assistance.)
6. If additional fertilization is needed to get a satisfactory stand, do so according to soil test recommendations.

Notes:
1. Permanent seeding optimum dates are March 1 to May 10 and August 10 to September 30, seeding done between May 10 to August 10 may require irrigation. Temporary seeding may be used as an alternative until preferred date for Permanent Seeding.
2. Retention/Detention area walls and base will be seeded as soon as possible using permanent seeding when possible, mulch or erosion control blankets are to be used on seeded areas to protect the soil from wind and water impact. Install silt fences around Retention/Detention area until seed is established.

Seeding Recommendations.
This table provides several seeding options. Additional seed species and mixtures are available commercially. When selecting a mixture, consider site conditions, including soil properties (e.g., soil pH and drainage), slope aspect and the tolerance of each species to shade and droughtiness.

Seed species and mixtures	Rate per acre: Permanent	Rate per acre: Dormont or frost	Optimum soil pH
OPEN AND DISTURBED AREAS (REMAINING IDLE MORE THAN 1 YR.)			
1. Perennial ryegrass	35 to 50 lbs.	50 to 75 lbs.	5.6 to 7.0
+ white or ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
2. Kentucky bluegrass	20 lbs.	30 lbs.	5.5 to 7.5
+ smooth bromegrass	10 lbs.	15 lbs.	
+ switchgrass	3 lbs.	5 lbs.	
+ timothy	4 lbs.	6 lbs.	
+ perennial ryegrass	10 lbs.	15 lbs.	
+ white or ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
3. Perennial ryegrass	15 to 30 lbs.	22 to 45 lbs.	5.6 to 7.0
+ tall fescue**	15 to 30 lbs.	22 to 45 lbs.	
4. Tall fescue**	35 to 50 lbs.	50 to 75 lbs.	5.5 to 7.5
+ ladino or white clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
STEEP BANKS AND CUTS, LOW MAINTENANCE AREAS (NOT MOWED)			
1. Smooth bromegrass	25 to 35 lbs.	35 to 50 lbs.	5.5 to 7.5
+ red clover*	10 to 20 lbs.	15 to 30 lbs.	
2. Tall fescue**	35 to 50 lbs.	50 to 75 lbs.	5.5 to 7.5
+ white or ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
3. Tall fescue**	35 to 50 lbs.	50 to 75 lbs.	5.5 to 7.5
+ red clover*	10 to 20 lbs.	15 to 30 lbs.	
(Recommended north of US 40)			
4. Orchardgrass	20 to 30 lbs.	30 to 45 lbs.	5.6 to 7.0
+ red clover*	10 to 20 lbs.	15 to 30 lbs.	
+ ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
5. Crownvetch*	10 to 12 lbs.	15 to 18 lbs.	5.6 to 7.0
+ tall fescue**	20 to 30 lbs.	30 to 45 lbs.	
(Recommended south of US 40)			
LAWNS AND HIGH MAINTENANCE AREAS			
1. Bluegrass	105 to 140 lbs.	160 to 210 lbs.	5.5 to 7.0
2. Perennial ryegrass (turf-type)	45 to 60 lbs.	70 to 90 lbs.	5.6 to 7.0
+ bluegrass	70 to 90 lbs.	105 to 135 lbs.	
3. Tall fescue (turf-type)**	130 to 170 lbs.	195 to 250 lbs.	5.6 to 7.5
+ bluegrass	20 to 30 lbs.	30 to 45 lbs.	
CHANNELS AND AREAS OF CONCENTRATED FLOW			
1. Perennial ryegrass	100 to 150 lbs.	150 to 225 lbs.	5.6 to 7.0
+ white or ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
2. Kentucky bluegrass	20 lbs.	30 lbs.	5.5 to 7.5
+ smooth bromegrass	10 lbs.	15 lbs.	
+ switchgrass	3 lbs.	5 lbs.	
+ timothy	4 lbs.	6 lbs.	
+ perennial ryegrass	10 lbs.	15 lbs.	
+ white or ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
3. Tall fescue**	100 to 150 lbs.	150 to 225 lbs.	5.5 to 7.5
+ ladino or white clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
4. Tall fescue**	100 to 150 lbs.	150 to 225 lbs.	5.5 to 7.5
+ Perennial ryegrass	15 to 20 lbs.	22 to 30 lbs.	
+ Kentucky bluegrass	15 to 20 lbs.	22 to 30 lbs.	

* For best results: (a) legume seed should be inoculated; (b) seeding mixtures containing legumes should preferably be spring-seeded, although the grass may be fall-seeded and the legume frost-seeded; and (c) if legumes are fall-seeded, do so in early fall.
** Tall fescue provides little cover for, and may be toxic to, some species of wildlife. The IDNR recognizes the need for additional research on alternatives to tall fescue, such as buffalograss, orchardgrass, smooth bromegrass, and switch-grass. This research, in conjunction with demonstration areas, should focus on erosion control characteristics, wildlife toxicity, turf durability, and drought resistance.

TEMPORARY SEEDING

Purpose: To stabilize disturbed areas especially along both sides of the streets and courts after final grading work is completed and where additional work is not scheduled.

Requirements:
Site and seedbed preparation: Graded, and lime and fertilizer applied

Seed Selected:
Selected on the basis of quick germination, growth, and time of year, see Table for temporary seeding recommendations.

Fertilize: According to soil test or use 600 lbs/acre 12-12-12 analysis or equivalent.

Mulch: 1.5 - 2 tons/acre straw. Straw must be dry, unchopped and free of undesirable seeds.

Application:
1. Fertilize and lime as recommended by the soil test.
2. Till the soil to obtain a uniform seedbed, working the fertilizer and lime into the soil 2-4" deep with a disk or rake operated across the slope.
3. Apply seed uniformly with a drill or cultipacker-seeder, or by broadcasting, and cover to a depth as shown on Table for temporary seeding recommendations.
4. If drilling or broadcasting, firm the seedbed with a roller or cultipacker.
5. Mulch all seeded areas. (Note: If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.)

Maintenance:
1. Inspect periodically after planting to see that vegetative stands are adequately established; re-seed if necessary.
2. Check for erosion damage after storm events and repair; re-seed and mulch if necessary.

Notes:
1. Vegetative Filter Strip: permanent or temporary, shall be done on all disturbed areas along both sides of the streets and courts to reduce erosion where additional work is not scheduled.
2. Permanent Seeding: or sodding shall be done at the time of final landscaping.

Exhibit 3.11-B. Temporary Seeding Recommendations.

Seed species*	Rate/acre	Planting depth	Optimum dates**
Wheat or rye	150 lbs.	1 to 1½ in.	9/15 to 10/30
Spring oats	100 lbs.	1 in.	3/1 to 4/15
Annual ryegrass	40 lbs.	1/4 in.	3/1 to 5/1 8/1 to 9/1
German millet	40 lbs.	1 to 2 in.	5/1 to 6/1
Sudangrass	35 lbs.	1 to 2 in.	5/1 to 7/30

* Perennial species may be used as a temporary cover, especially if the area to be seeded will remain idle for more than a year (See PERMANENT SEEDING)
** Seeding done outside the optimum dates increases the chances of seeding failure.

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NEW MIDDLE SCHOOL

CROWN POINT COMMUNITY SCHOOL CORPORATION

CROWN POINT, INDIANA

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