

EXISTING LEGEND

-  Beehive Inlet
-  Tree

PROPERTY DESCRIPTION
 A part of the Northwest Quarter of Section 36, Township 19 North, Range 3 East of the Second Principal Meridian, in Washington Township, Hamilton County, Indiana, described as follows:
 Commencing at the Northeast corner of the Northwest Quarter of said section; thence South 89 degrees 11 minutes 02 seconds West 905.68 feet along the north line of said quarter section to the point of beginning; thence South 0 degrees 20 minutes 06 seconds West 825.56 feet; thence South 88 degrees 50 minutes 13 seconds West 398.77 feet; thence North 0 degrees 20 minutes 06 seconds East 827.98 feet to the aforementioned north line; thence North 89 degrees 11 minutes 02 seconds East 398.71 feet along said north line to the point of beginning and containing 7.566 acres more or less.

7280 SHADELAND STATION
 INDIANAPOLIS, IN 46226-3957
 TEL 317.547.5588 FAX 317.543.0270
 www.structurepoint.com

AMERICAN STRUCTUREPOINT INC.



REGISTERED
 No. 10606572
 STATE OF INDIANA
 PROFESSIONAL ENGINEER

CERTIFIED BY



EXISTING TOPOGRAPHY / DEMOLITION PLAN

PREPARED FOR:
MAINSTREET PROPERTY GROUP, LLC
109 W. JACKSON STREET
CICERO, INDIANA 46034

PROJECT:
MAINSTREET HEALTH AND WELLNESS SUITES OF WESTFIELD WESTFIELD, INDIANA

NOTES:

- CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.
- CONTRACTOR TO VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION EXISTS.

BENCH MARK INFORMATION
 NAVD 88 DATUM USING OPUS SOLUTION #11-58322240 DATED 8-15-2011

CPT 800
 REBAR SET AT N=40.05728089, W=86.13705484
 ELEV = 898.60

TBM 80
 RAILROAD SPIKE ON THE WEST SIDE OF AN 18" OAK TREE ON THE NORTH PROPERTY LINE IN FENCE ROW 400± EAST OF A DITCH.
 ELEV = 908.24

CAUTION !!

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

1-800-382-5544
 CALL TOLL FREE
 - INDIANA UNDERGROUND -

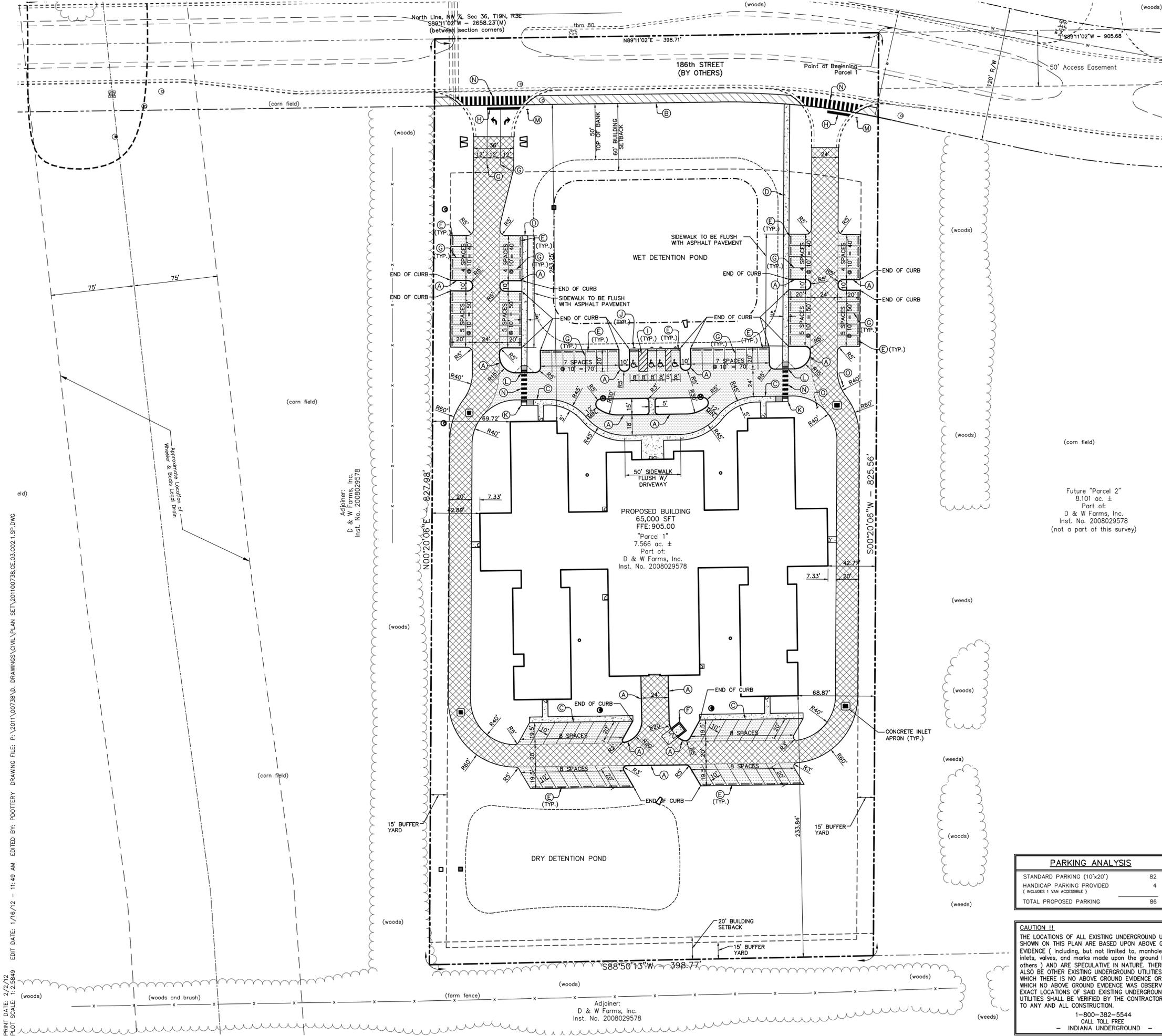
DATE:	02/03/12
DRAWN BY:	PED
CHK'D BY:	KDK
JOB NO.	201100738

REVISIONS	

SHEET NO.
C1.1
 OF

PRINT DATE: 2/2/12 PLOT SCALE: 1"=200' EDIT DATE: 1/16/12 - 6:03 AM EDITED BY: POTTERTY DRAWING FILE: P:\2011\00738.D\DRAWINGS\CIVIL\PLAN SET\201100738.CE.02.C01.1.XTP.DWG

Adj. No. 2008029578
 D & W Farms, Inc.
 Inst. No. 2008029578



0' 40' 80'
SCALE: 1"=40'

PROPOSED SITE LEGEND

- LIGHT DUTY PAVEMENT
- HEAVY DUTY PAVEMENT
- CONCRETE
- ASPHALT MULTI-USE PATH
- 6" STRAIGHT CONCRETE CURB
- 8" ASPHALT MULTI-USE PATH
- COMBINED CURB & WALK
- CONCRETE SIDEWALK
- PARKING BUMPER
- DUMPSTER ENCLOSURE (SEE ARCH. PLANS)
- 4" SOLID WHITE, PAINT LINE
- 24" STOP BAR, WHITE, THERMOPLASTIC
- 4" SOLID BLUE, PAINT LINE (A.D.A. SPACE)
- ADA PARKING SIGN (VAN ACCESSIBLE AS NOTED)
- A.D.A. RAMP (TYPE "K")
- A.D.A. RAMP (TYPE "C")
- STOP SIGN
- 24" SOLID WHITE, PAINT LINE (CROSSWALK)
- "ONE WAY DO NOT ENTER" SIGN
- HANDICAP ACCESSIBLE PARKING SPACE

SITE NOTES

1. ALL WORK TO CONFORM TO STATE AND LOCAL REGULATIONS.
2. ALL PARKING STRIPES ARE TO BE 4" PAINTED (WHITE). HANDICAPPED ACCESS AISLES SHALL BE 4" PAINTED (BLUE).
3. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT OR FACE OF CURB, UNLESS NOTED OTHERWISE.
4. ALL DIMENSIONS ARE TO FACE OF BRICK OR FACING MATERIAL, WHERE APPLICABLE.
5. ALL DIMENSIONS ARE PARALLEL WITH, OR PERPENDICULAR TO BASE LINES, PROPERTY LINES OR BUILDING LINES UNLESS NOTED OTHERWISE.
6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
7. PROVIDE SMOOTH TRANSITIONS FROM NEW AREAS TO EXISTING FEATURES AS NECESSARY.
8. ALL EXCAVATED AREAS SHALL BE SEEDED AFTER FINISH GRADING UNLESS OTHERWISE NOTED. ALL NEW SEEDED AREAS SHALL HAVE A MINIMUM OF 4" OF TOP SOIL.
9. RESURFACE OR RECONSTRUCT AT LEAST TO ORIGINAL CONDITIONS ALL AREAS WHERE THE EXISTING PAVEMENT OR LAWNS ARE DAMAGED DURING CONSTRUCTION FROM TRAFFIC BY CONTRACTORS, SUBCONTRACTORS OR SUPPLIERS AFTER CONSTRUCTION WORK IS COMPLETE.
10. THE EDGE OF EXISTING ASPHALT PAVEMENT SHALL BE PROPERLY SEALED WITH A TACK COAT MATERIAL IN ALL AREAS WHERE NEW ASPHALT PAVEMENT IS INDICATED TO JOIN EXISTING ASPHALT.
11. ALL UTILITY TRENCHES WITHIN 5 FEET OF PAVEMENT SHALL BE COMPLETELY BACKFILLED WITH GRANULAR MATERIAL.
12. ALL ASPHALT TO BE IN ACCORDANCE WITH I.N.D.O.T. STANDARD SPECIFICATIONS RELATIVE TO MATERIAL, MIX, PLACEMENT AND WORKMANSHIP.
13. CHAMFER ENDS OF ALL CURBS.
14. SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS.
15. ALL SIDEWALKS SHALL COMPLY WITH A.D.A. STANDARDS, MAX. CROSS SLOPE OF 1:50 & MAX. SLOPE OF 1:20.
16. EXISTING PAVEMENT TO BE SAWCUT IN ALL AREAS WHERE INDICATED NEW PAVEMENT TO JOIN EXISTING.

PROPERTY DESCRIPTION

A part of the Northwest Quarter of Section 36, Township 19 North, Range 3 East of the Second Principal Meridian, in Washington Township, Hamilton County, Indiana, described as follows:

Commencing at the Northeast corner of the Northwest Quarter of said section; thence South 89 degrees 11 minutes 02 seconds West 905.68 feet along the north line of said quarter section to the point of beginning; thence South 0 degrees 20 minutes 06 seconds West 825.56 feet; thence South 88 degrees 50 minutes 13 seconds West 398.77 feet; thence North 0 degrees 20 minutes 06 seconds East 827.98 feet to the aforementioned north line; thence North 89 degrees 11 minutes 02 seconds East 398.71 feet along said north line to the point of beginning and containing 7.566 acres more or less.

PARKING ANALYSIS	
STANDARD PARKING (10'x20')	82
HANDICAP PARKING PROVIDED (INCLUDES 1 VAN ACCESSIBLE)	4
TOTAL PROPOSED PARKING	86

CAUTION II
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NOTE:
ALL MAINTENANCE OF TRAFFIC SIGNAGE METHODS, MATERIALS AND CONSTRUCTION DETAILS FOR WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL CONFORM TO CITY OF WESTFIELD REQUIREMENTS, INDOT STANDARD DETOUR SHEETS AND SPECIFICATIONS AND THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THIS INCLUDES PLACING ROAD CONSTRUCTION AHEAD SIGNS, LANE MERGING SIGNS, FLASHING ARROW SIGNS, CONSTRUCTION BARRELS, ETC.

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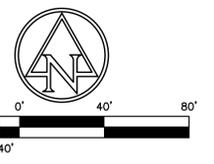
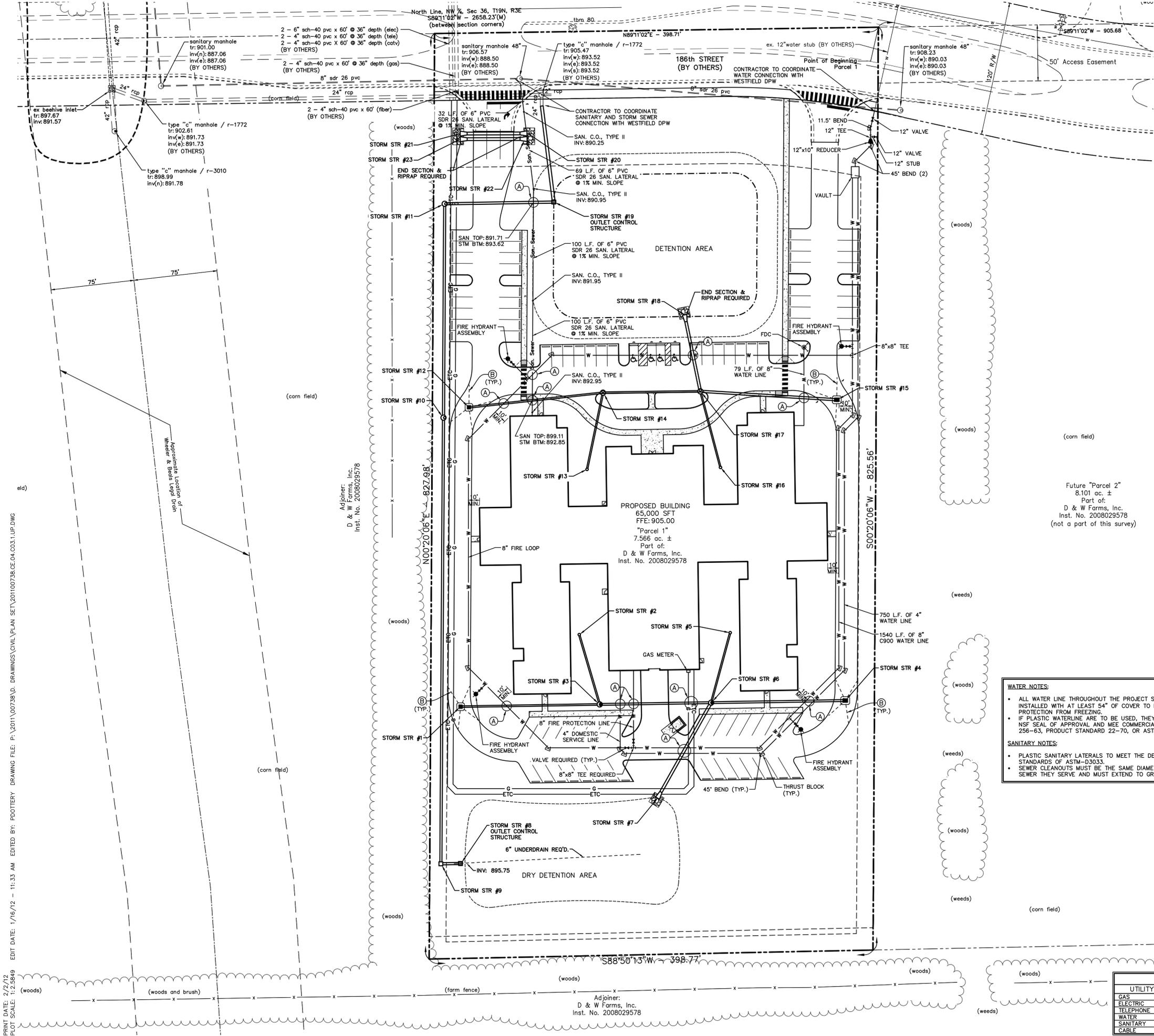
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PRINT DATE: 2/2/12 PLOT SCALE: 1:2,584.9 EDIT DATE: 1/16/12 - 11:49 AM EDITED BY: P00TTERY DRAWING FILE: P:\2011\00738.D. DRAWINGS\CIVIL\PLAN SET\201100738.CE.03.C02.1.SP.DWG

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- EXISTING LEGEND**
- Beehive Inlet
 - Tree
- PROPOSED UTILITY LEGEND**
- SANITARY SEWER LINE
 - GAS LINE
 - ELECTRIC/TELEPHONE/CABLE LINE
 - WATER LINE
 - GAS METER
 - ELECTRICAL TRANSFORMER
 - VALVE
 - HYDRANT
 - 18" VERTICAL SEPARATION REQ'D.
 - 20 LF OF PERFORATED UNDERDRAIN

- GENERAL UTILITY NOTES**
- ALL WORK TO CONFORM TO STATE AND LOCAL REGULATIONS.
 - SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
 - THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS (VERTICAL AND HORIZONTAL) IN THE FIELD PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM THE ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
 - THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTOR'S AND/OR UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
 - THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START, TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (location, size and depth) SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION.
 - TRENCHES FOR ALL STORM DRAIN LINES SHALL BE BACKFILLED COMPLETELY WITH GRANULAR MATERIAL IF WITHIN 5 FEET OF PAVEMENT.
 - AFTER STRIPPING TOPSOIL MATERIAL, PROOFROLL WITH A MEDIUM WEIGHT ROLLER TO DETERMINE LOCATIONS OF ANY POCKETS OF UNSUITABLE MATERIAL. THE NECESSITY FOR SUBDRAINS AND/OR REMOVAL OF ANY UNSUITABLE MATERIAL WITHIN THE PROPOSED PARKING AREAS WILL BE DETERMINED AT THE TIME OF CONSTRUCTION.
 - PROVIDE POSITIVE DRAINAGE WITHOUT PONDING, IN ALL AREAS. AFTER INSTALLATION, CONTRACTOR TO TEST FOR, AND CORRECT, IF ANY, STANDING WATER CONDITIONS.
 - ALL PROPOSED SPOT ELEVATIONS ARE THE FINAL PAVEMENT AND FINAL GRADE ELEVATIONS.
 - SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED.
 - ALL STORM SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO LOCAL STANDARDS.
 - INVERTS AT PIPE OUTLETS ARE GIVEN AT END OF PIPE END SECTION.
 - ALL SANITARY SEWER LATERALS MUST HAVE LOCATE WIRE RUN WHEN INSTALLING THE LINE.

- WATER NOTES:**
- ALL WATER LINE THROUGHOUT THE PROJECT SHALL BE INSTALLED WITH AT LEAST 54" OF COVER TO PROVIDE PROTECTION FROM FREEZING.
 - IF PLASTIC WATERLINE ARE TO BE USED, THEY SHALL BEAR THE NSF SEAL OF APPROVAL AND MEE COMMERCIAL STANDARD NO. 256-63, PRODUCT STANDARD 22-70, OR ASTM D2241.
- SANITARY NOTES:**
- PLASTIC SANITARY LATERALS TO MEET THE DEFLECTION STANDARDS OF ASTM-D3033.
 - SEWER CLEANOUTS MUST BE THE SAME DIAMETER AS THE SEWER THEY SERVE AND MUST EXTEND TO GRADE.

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 #11-58322240 DATED 8-15-2011

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UTILITY CONTACTS			
UTILITY	COMPANY	CONTACT	PHONE NO.
GAS	CITIZENS GAS OF WESTFIELD	RICHARD MILLER	317-927-4684
ELECTRIC	DUKE ENERGY	SHIRLEY HUNTER	317-896-6711
TELEPHONE	FRONTIER COMMUNICATION	STEVIE COSTLOW	317-984-9010
WATER	WESTFIELD WATER	BRIAN FORKNER	317-804-3100
SANITARY	WESTFIELD WASTEWATER	BRIAN FORKNER	317-804-3100
CABLE	COMCAST	MATTHEW STRINGER	317-774-3384

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UTILITY PLAN

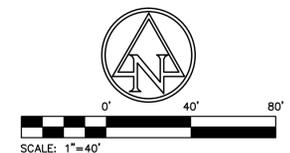
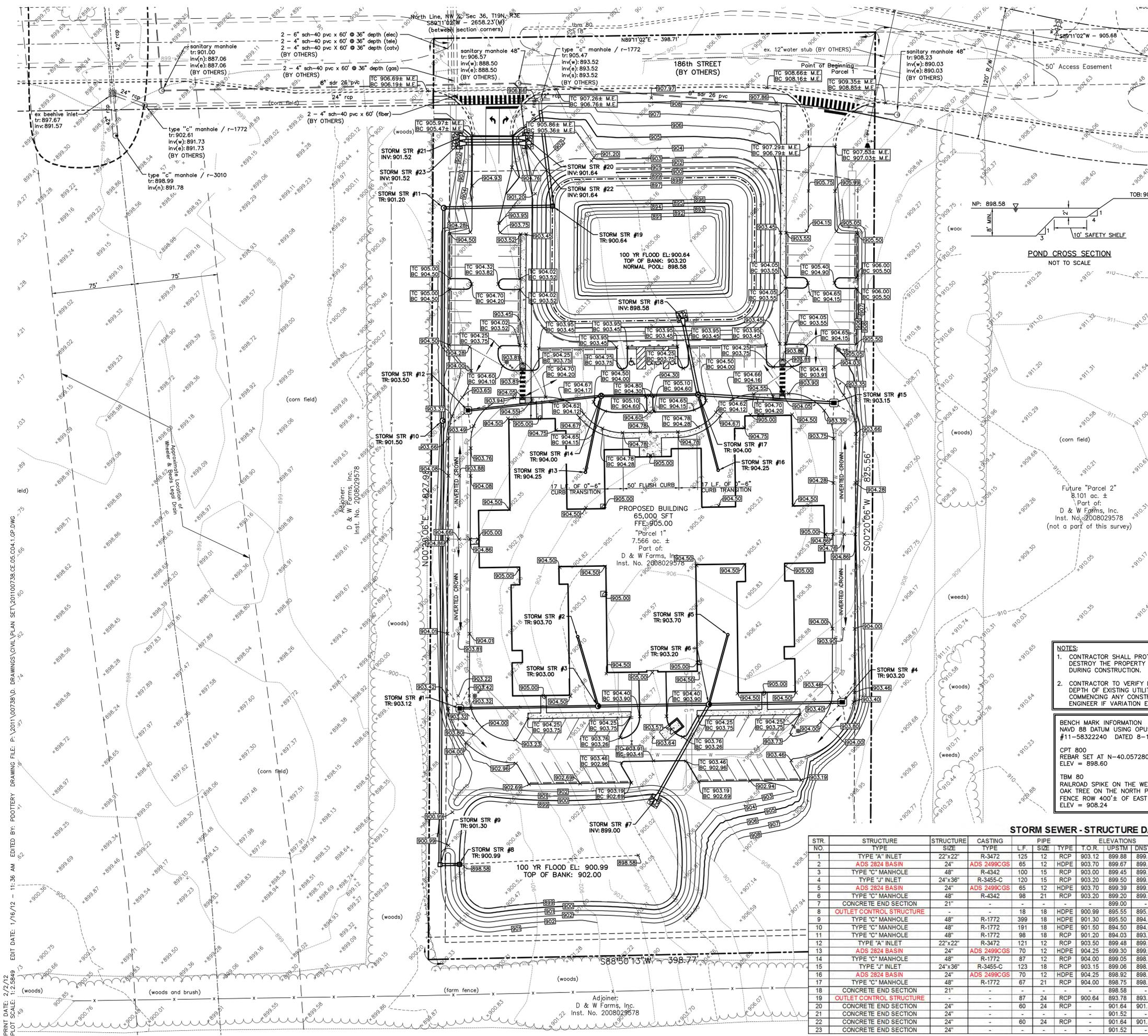
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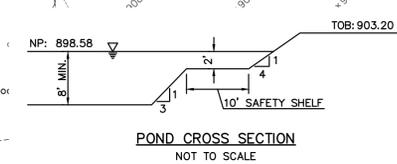
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- EXISTING LEGEND**
- Beehive Inlet
 - Tree
- PROPOSED GRADING LEGEND**
- M.E. MATCH EXISTING
 - EP EDGE OF PAVEMENT
 - BC BOTTOM OF CURB
 - TC TOP OF CURB
 - CONTOURS
 - FLOW LINE
 - CURB ELEVATIONS
 - SPOT ELEVATIONS
 - RIDGE LINE



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 10. SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED.
 11. ALL STORM SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO LOCAL STANDARDS.
 12. INVERTS AT PIPE OUTLETS ARE GIVEN AT END OF PIPE END SECTION.
 13. DEBRIS GUARD TO BE INSTALLED AT ALL OPEN ENDED INLETS.
 14. DUE TO SITE CONSTRAINTS, THE SITE MAY OR MAY NOT BALANCE. THE CONTRACTOR IS RESPONSIBLE FOR ALL EARTHWORK IMPORTS AND/OR EXPORTS.
 15. THIS LOT DOES NOT LIE WITHIN ANY FLOOD HAZARD ZONE AS SCALED FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR HAMILTON COUNTY, INDIANA, COMMUNITY HAMILTON, CITY OF WESTFIELD, COMMUNITY NUMBER 18057C, PANEL NUMBER 0120F, DATED FEBRUARY 19, 2003.

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STORM SEWER - STRUCTURE DATA TABLE

STR NO.	STRUCTURE TYPE	STRUCTURE SIZE	CASTING TYPE	PIPE TYPE	PIPE SIZE	ELEVATIONS	DEPTH	GRADE	CONNECT TO STRUCTURE	DIRECTION OF PIPE	REMARKS	
1	TYPE "A" INLET	22"x22"	R-3472	125	12	RCP	903.12	899.88	899.45	2.07	2.39	0.35
2	ADS 2824 BASIN	24'	ADS 2499CGS	65	12	HDPE	903.70	899.67	899.45	2.86	2.39	0.35
3	TYPE "C" MANHOLE	48"	R-4342	100	15	RCP	903.00	899.45	899.20	2.12	2.57	0.25
4	TYPE "J" INLET	24"x36"	R-3455-C	120	15	RCP	903.20	899.50	899.20	2.27	2.57	0.25
5	ADS 2824 BASIN	24'	ADS 2499CGS	65	12	HDPE	903.70	899.39	899.20	3.14	2.84	0.30
6	TYPE "C" MANHOLE	48"	R-4342	98	21	RCP	903.20	899.20	899.00	2.02	-	0.20
7	CONCRETE END SECTION	21"	-	-	-	-	899.00	-	-	-	-	-
8	OUTLET CONTROL STRUCTURE	-	-	18	18	HDPE	900.99	895.55	895.50	3.74	4.09	0.25
9	TYPE "C" MANHOLE	48"	R-1772	399	18	HDPE	901.30	895.50	894.50	4.09	5.29	0.25
10	TYPE "C" MANHOLE	48"	R-1772	191	18	HDPE	901.50	894.50	894.03	5.29	5.47	0.25
11	TYPE "C" MANHOLE	48"	R-1772	98	18	RCP	901.20	894.03	893.78	5.47	5.15	0.25
12	TYPE "A" INLET	22"x22"	R-3472	121	12	RCP	903.50	899.48	899.05	2.86	3.78	0.35
13	ADS 2824 BASIN	24'	ADS 2499CGS	70	12	HDPE	904.25	899.30	899.05	3.79	3.78	0.35
14	TYPE "C" MANHOLE	48"	R-1772	87	12	RCP	904.00	899.05	898.75	3.78	4.09	0.35
15	TYPE "J" INLET	24"x36"	R-3455-C	123	18	RCP	903.15	899.06	898.75	2.39	3.54	0.25
16	ADS 2824 BASIN	24'	ADS 2499CGS	70	12	HDPE	904.25	898.92	898.75	4.16	4.09	0.25
17	TYPE "C" MANHOLE	48"	R-1772	67	21	RCP	904.00	898.75	898.58	3.27	-	0.25
18	CONCRETE END SECTION	21"	-	-	-	-	898.58	-	-	-	-	-
19	OUTLET CONTROL STRUCTURE	-	-	87	24	RCP	900.64	893.78	893.52	4.61	-	0.30
20	CONCRETE END SECTION	24"	-	-	60	24	RCP	901.64	901.52	-	-	0.20
21	CONCRETE END SECTION	24"	-	-	-	-	901.52	-	-	-	-	0.20
22	CONCRETE END SECTION	24"	-	-	-	-	901.52	-	-	-	-	0.20
23	CONCRETE END SECTION	24"	-	-	-	-	901.52	-	-	-	-	0.20

PRINT DATE: 2/2/12
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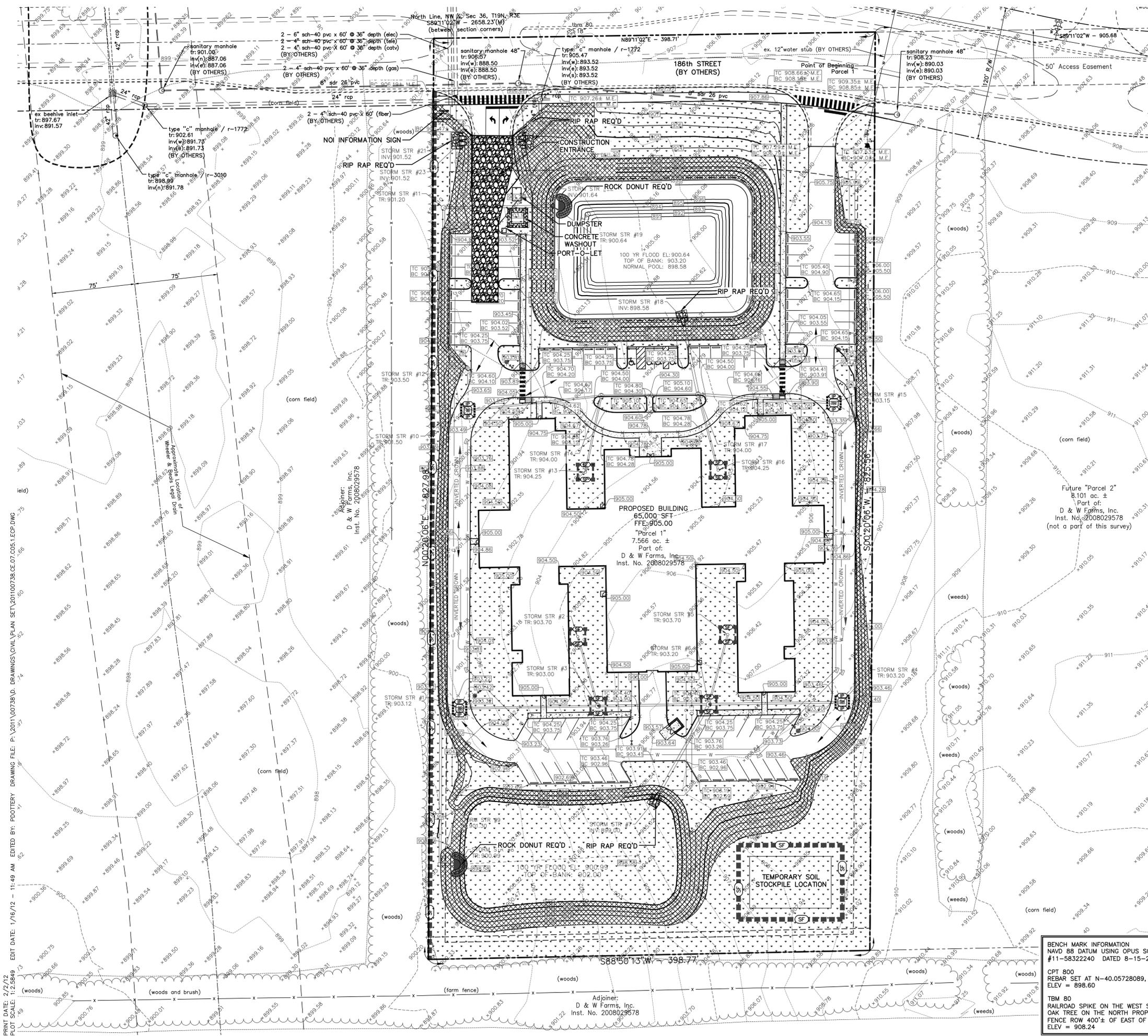
PREPARED FOR:
MAINSTREET PROPERTY GROUP, LLC
 109 W. JACKSON STREET
 CICERO, INDIANA 46034

PROJECT:
MAINSTREET HEALTH AND WELLNESS SUITES OF WESTFIELD WESTFIELD, INDIANA

DATE: 02/03/12
 DRAWN BY: PED
 CHK'D BY: KDK
 JOB NO. 201100738

REVISIONS

SHEET NO.
C4.1
 OF



SCALE: 1"=40'

EXISTING LEGEND

- Beehive Inlet
- Tree

PROPOSED EROSION CONTROL LEGEND

- SILT FENCE
- CATCH ALL INLET PROTECTION
- SILT FENCE INLET PROTECTION
- EROSION CONTROL BLANKET
- PERMANENT SEEDING
- GRAVEL CONSTRUCTION ENTRANCE
- M.E. MATCH EXISTING
- EP EDGE OF PAVEMENT
- BC BOTTOM OF CURB
- TC TOP OF CURB
- CONTOURS
- FLOW LINE
- CURB ELEVATIONS
- SPOT ELEVATIONS

EROSION CONTROL NOTES

1. LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
2. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
3. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
4. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
5. SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN THE RECEIVING STREAM. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
6. WASTE AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORM WATER RUNOFF. PROPER DISPOSAL OF ALL WASTE AND UNUSED BUILDING MATERIALS IS REQUIRED.
7. SEDIMENT BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
8. SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND RE-DISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.
9. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
10. ALL EXISTING STRUCTURES, FENCINGS, TREES AND ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF SITE. BURNING IS NOT ALLOWED ON SITE.
11. THIS LOT DOES/DOES NOT LIE WITHIN ANY FLOOD HAZARD ZONE AS SCALD FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR HAMILTON COUNTY, INDIANA, COMMUNITY MAP OF WESTFIELD, COMMUNITY NUMBER 18057C, PANEL NUMBER 0120F, DATED FEBRUARY 19, 2003.
12. SCHEDULE OF EARTHWORK ACTIVITIES:
 - a. THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED AS SOON AS POSSIBLE. TEMPORARY VEGETATION OR MULCHING SHALL BE USED TO PROTECT EXPOSED AREAS IF PERMANENT VEGETATION CANNOT BE SEEDED WITHIN 14 DAYS OR ACTIVITY CEASES FOR MORE THAN 21 DAYS OR AS DIRECTED BY THE ENGINEER.
 - b. TOPSOIL REPLACEMENT SHALL TAKE PLACE FROM MARCH 1 TO OCTOBER 31. STOCKPILE TOPSOIL AT ALL OTHER TIMES OF THE YEAR. PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.
13. ALL EROSION CONTROL MATERIAL SHALL BE APPROVED BY THE WPWD INSPECTORS PRIOR TO INSTALLATION.

- NOTES:**
1. CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.
 2. CONTRACTOR TO VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION EXISTS.

CAUTION !!
 THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.
 1-800-382-5544
 CALL TOLL FREE
 - INDIANA UNDERGROUND -

BENCH MARK INFORMATION
 NAVD 88 DATUM USING OPUS SOLUTION
 #11-58322240 DATED 8-15-2011
 CPT 800
 REBAR SET AT N=40.05728089, W=-86.13705484
 ELEV = 898.60
 TBM 80
 RAILROAD SPIKE ON THE WEST SIDE OF AN 18" OAK TREE ON THE NORTH PROPERTY LINE IN FENCE ROW 400± EAST OF A DITCH.
 ELEV = 908.24

PRINT DATE: 2/2/12
 PLOT SCALE: 1"=2.5849'
 EDIT DATE: 1/16/12 - 11:49 AM
 EDITED BY: POTTERTY
 DRAWING FILE: P:\2011\00738\CAD\DRAWINGS\CIVIL\PLAN SET\201100738.CE.07.C05.1.ECP.DWG
 SET: 201100738.CE.07.C05.1.ECP.DWG

7280 SHADELAND STATION
 INDIANAPOLIS, IN 46263-9572
 TEL: 317.547.5580 FAX: 317.543.0270
 www.structurepoint.com

AMERICAN STRUCTUREPOINT INC.

REGISTERED PROFESSIONAL ENGINEER
 No. 10606572
 STATE OF INDIANA
 KEVIN D. KRUMHOLTZ
 CERTIFIED BY

EROSION CONTROL PLAN

PREPARED FOR:
MAINSTREET PROPERTY GROUP, LLC
 109 W. JACKSON STREET
 CICERO, INDIANA 46034

PROJECT:
MAINSTREET HEALTH AND WELLNESS SUITES OF WESTFIELD WESTFIELD, INDIANA

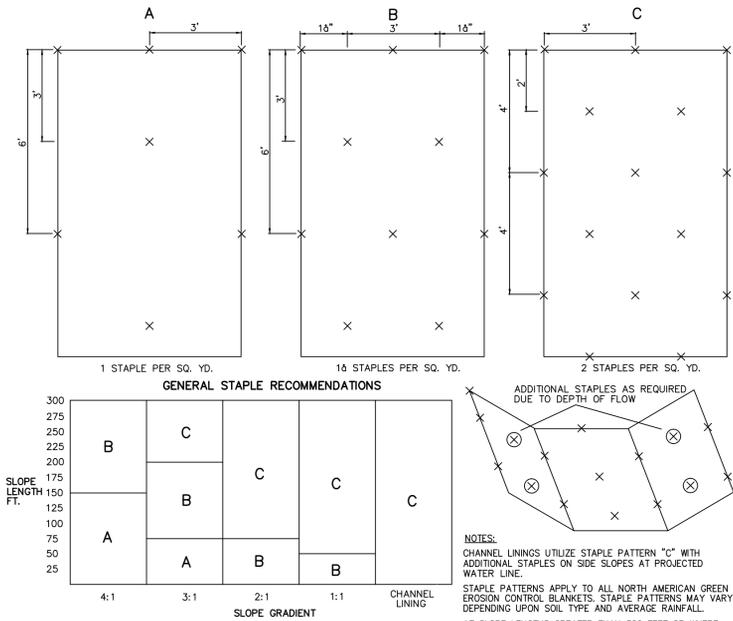
DATE: 02/03/12
 DRAWN BY: PED
 CHK'D BY: KDK
 JOB NO. 201100738

NO.	REVISIONS

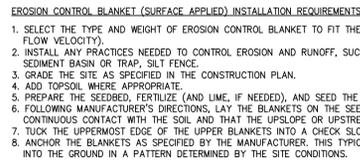
SHEET NO.
C5.1
 OF

EROSION CONTROL NOTES:

- CONSTRUCTION ACTIVITY SHALL CONSIST OF UTILITIES, DRAINAGE SWALES AND DETENTION BASIN.
- PRELIMINARY CONSTRUCTION SCHEDULE: EARTHWORK SHALL BEGIN IN THE SUMMER OF 2012. INSTALLATION OF STORM DRAINAGE STRUCTURES, SANITARY SEWERS AND WATERMANS SHALL BEGIN IN THE SUMMER OF 2012. COMPLETION OF THE PROJECT IS ANTICIPATED IN 2012. THIS SCHEDULE IS SUBJECT TO CHANGE.
- LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
- CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
- THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
- SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN THE RECEIVING STREAM. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
- WASTES AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORM WATER RUNOFF. PROPER DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS IS REQUIRED.
- SEDIMENT BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
- SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND RE-DISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.
- IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
- EXISTING VEGETATION SHALL BE PRESERVED IN AREAS NOT DISTURBED BY CONSTRUCTION ACTIVITY.
- THERE ARE NO BORROW AREAS OTHER THAN THOSE DESIGNATED.
- ALL APPLICABLE EROSION CONTROL MEASURES SHALL BE PLACED BEFORE ANY LAND DISTURBING ACTIVITIES.
- SCHEDULE OF EROSION CONTROL ACTIVITIES:
 - INSTALL INLET PROTECTION AROUND INLETS IMMEDIATELY UPON COMPLETION OF THE STRUCTURE. REMOVE INLET PROTECTION FOR PAVING OPERATION. REPLACE INLET PROTECTION AFTER PAVING IS COMPLETE. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED ON SEEDED AREAS BEHIND THE CURB.
 - THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED AS SOON AS POSSIBLE. TEMPORARY VEGETATION OR MULCHING SHALL BE USED TO PROTECT EXPOSED AREAS IF PERMANENT VEGETATION CANNOT BE SEEDED WITHIN 14 DAYS OR ACTIVITY CANNOT BE COMPLETED IN 14 DAYS OR AS DIRECTED BY THE ENGINEER.
 - TOPSOIL REPLACEMENT SHALL TAKE PLACE FROM MARCH 1 TO OCTOBER 31. STOCKPILE TOPSOIL AT ALL OTHER TIMES OF THE YEAR. PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FILING A NOTICE OF INTENT WITH THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.
- APPLY FERTILIZER AT A RATE ADEQUATE TO PROVIDE 1 LB. OF ACTUAL NITROGEN PER 1,000 SQUARE FEET. USE COMMERCIAL GRADE COMPLETE FERTILIZER OF NEUTRAL CHARACTER CONSISTING OF FAST AND SLOW RELEASE NITROGEN, 50 PERCENT DERIVED FROM NATURAL ORGANIC SOURCES OF UREA-FORM, PHOSPHOROUS, AND IN FOLLOWING COMPOSITION:
 - FERTILIZER FOR LAWNS: PROVIDE A FAST RELEASE FERTILIZER WITH A COMPOSITION OF 1 LB PER 1,000 SQ. FT. OF ACTUAL NITROGEN, 4 PERCENT PHOSPHOROUS, AND 2 PERCENT POTASSIUM BY WEIGHT.
 - SLOW-RELEASE FERTILIZER FOR TREES AND SHRUBS: GRANULAR FERTILIZER CONSISTING OF 50 PERCENT WATER-INSOLUBLE NITROGEN, PHOSPHOROUS AND POTASSIUM MADE UP OF A COMPOSITION BY WEIGHT OF 5 PERCENT.
- ADD LIME TO TOPSOIL TO OBTAIN A pH RANGE OF 6.0 TO 7.0. LIME SHALL BE ASTM C 602, CLASS 1, AGRICULTURAL LIMESTONE CONTAINING A MINIMUM OF 80 PERCENT CALCIUM CARBONATE EQUIVALENT, WITH A MINIMUM 99 PERCENT PASSING A NO. 8 (2.36 mm) SIEVE AND A MINIMUM 75 PERCENT PASSING A NO. 50 (250 MICROMETER) SIEVE.
- CONSTRUCTION TRAFFIC SHALL ENTER THE SITE AT DRIVES WHICH ARE CURRENTLY PAVED.
- CONTRACTOR TO SEED ALL DISTURBED AREAS. FINISH GRADE TO BE SEED AND STRAW.
- CONTRACTOR SHALL MONITOR TRUCK WASHING AND SEDIMENT TRACKING ONTO STREETS. STREET CLEANING WILL BE REQUIRED BY OWNER. FISHERS OR THE HAMILTON COUNTY SOIL AND WATER CONSERVATION DISTRICT IF ROADWAYS HAVE SOIL FROM THE SITE TRACKED ONTO THEM.



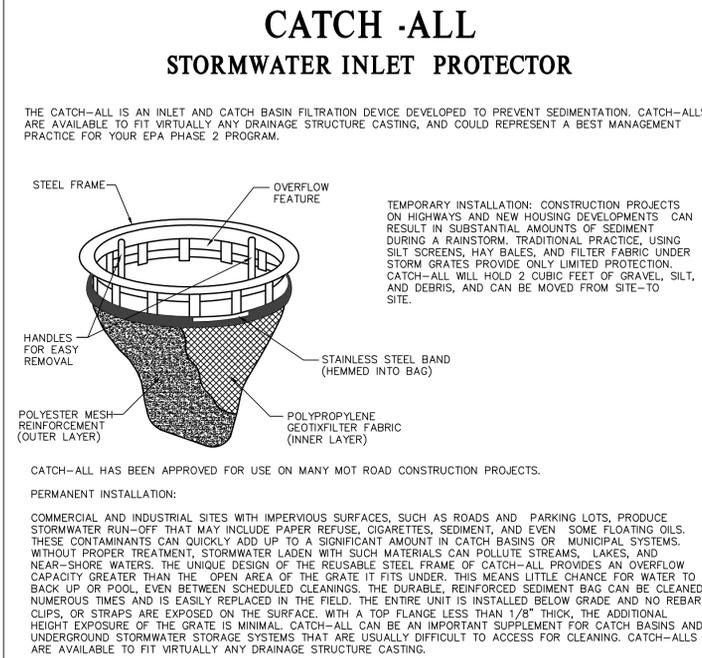
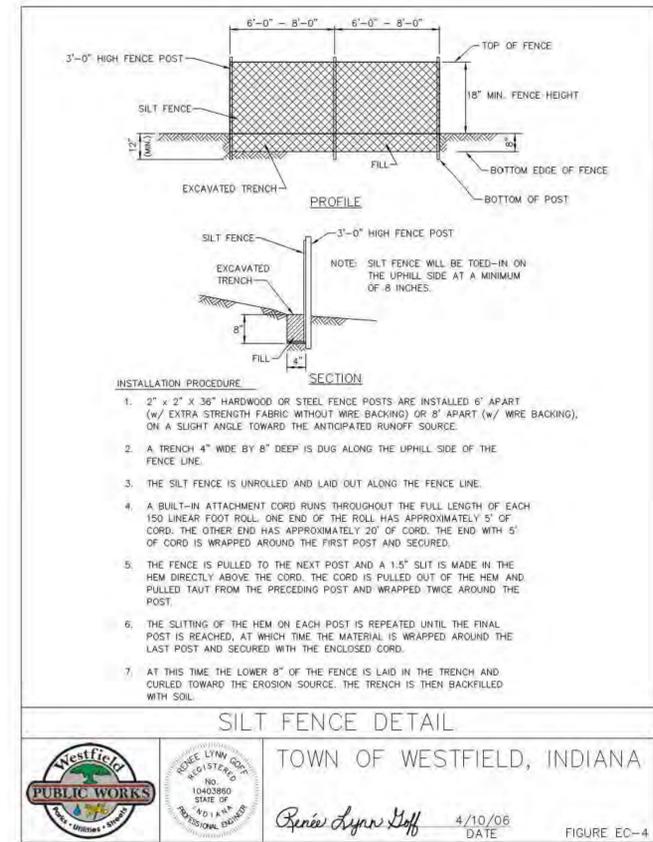
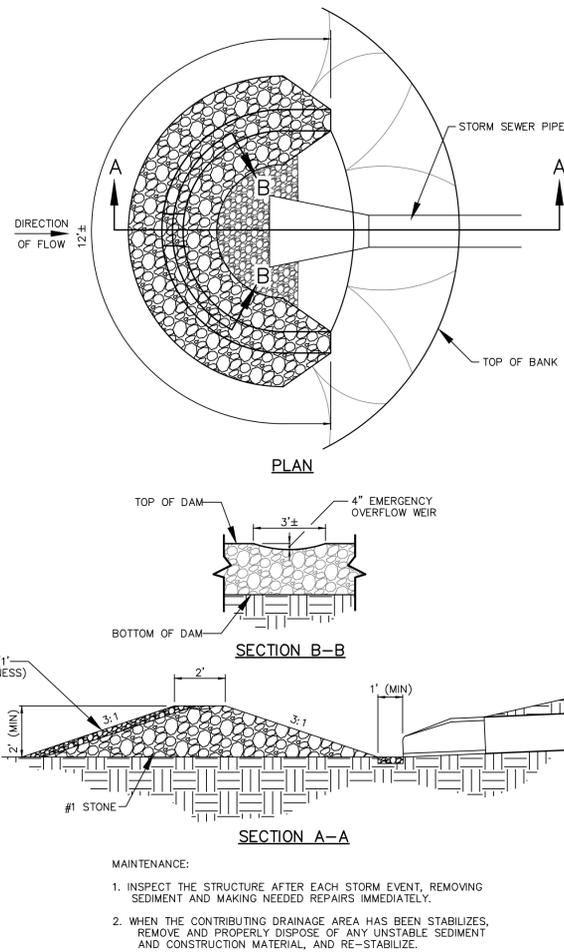
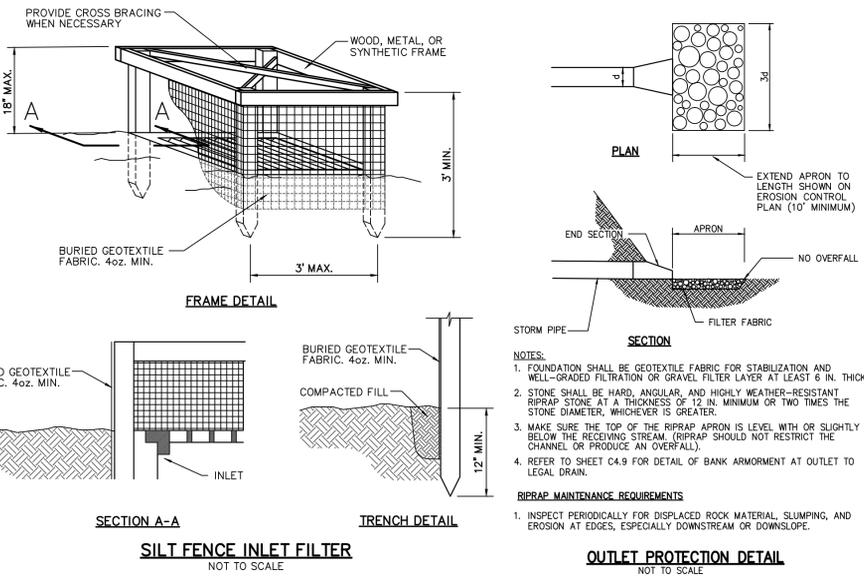
EROSION CONTROL MAT INSTALLATION GUIDE DETAIL
NOT TO SCALE



- EROSION CONTROL BLANKET (SURFACE APPLIED) MAINTENANCE REQUIREMENTS**
- DURING VEGETATIVE ESTABLISHMENT INSPECT AFTER STORM EVENTS FOR ANY EROSION BELOW THE BLANKET.
 - 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.
 - AFTER VEGETATIVE ESTABLISHMENT CHECK THE TREATED AREA PERIODICALLY.

STABILIZATION PRACTICE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING		A	A	A	A	A	A	A	A	A	A	A
DORMANT SEEDING	B											B
TEMPORARY SEEDING			C	C	C	C	C	C	C	C	C	

- A = KENTUCKY BLUEGRASS 100 LBS./ACRE; CREEPING RED FESCUE 100 LBS./ACRE; HYDROSEEDED
 B = KENTUCKY BLUEGRASS 120 LBS./ACRE; CREEPING RED FESCUE 120 LBS./ACRE; HYDROSEEDED
 C = SPRING OATS 3 BUSHELS/ACRE
 D = WHEAT OR RYE 2 BUSHELS/ACRE
 E = ANNUAL RYE GRASS 40 LBS./ACRE (1 LB/1000 SQ. FT.)
 // = IRRIGATION NEEDED DURING JUNE, JULY, AUGUST AND/OR SEPTEMBER



D2 LAND & WATER RESOURCE INC.
P.O. BOX 20792
INDIANAPOLIS, IN 46220
PHONE (317) 917-2180
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Z860 SHADELAND STATION
INDIANAPOLIS, IN 46263-3957
TEL: 317.547.5580 FAX: 317.543.0270
www.structurepoint.com

AMERICAN STRUCTUREPOINT INC.

REGISTERED PROFESSIONAL ENGINEER
No. 10606572
STATE OF INDIANA
K. W. D. KRUMHOLTZ

PREPARED FOR:
MAINSTREET PROPERTY GROUP, LLC
109 W. JACKSON STREET
CICERO, INDIANA 46034

PROJECT:
MAINSTREET HEALTH AND WELLNESS SUITES OF WESTFIELD WESTFIELD, INDIANA

DATE: 02/03/12
DRAWN BY: PED
CHK'D BY: KDK
JOB NO. 201100738

REVISIONS

SHEET NO.
C5.2
OF

SITE NAME:

The area scheduled for construction is known as "Mainstreet Health & Wellness Suites of Westfield" (hereinafter referred to as the "Project").

PROJECT LOCATION:

The property is located at southwest corner of E 11th St and future 186th St in Westfield, Indiana, at a latitude of 40°03'24" N and a longitude of 86°08'27" W.

OWNER'S INFORMATION:

Name: Mainstreet Property Group, LLC
Address: 109 West Jackson Street
Representative: Henry Nuckols
Title: Director of Construction and Asset Management
Telephone: (317) 420-0205
Facsimile: (317) 420-0206

OPERATOR'S INFORMATION:

Name: Mainstreet Property Group, LLC
Address: 109 West Jackson Street
Representative: Henry Nuckols
Title: Director of Construction and Asset Management
Telephone: (317) 420-0205
Facsimile: (317) 420-0206

NOTICE OF INTENT:

All parties defined as owners or operators must submit a Notice of Intent (NOI) at least 48 hours prior to commencement of on-site construction activities. Submittal of late NOIs is not prohibited; however, authorization under the construction general permit is only for discharges that occur after permit coverage is granted. Unpermitted discharges may be subject to enforcement actions by the EPA. For the purposes of this permit, an operator is defined as any party meeting either of the following requirements:

- a. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications.
b. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a storm water pollution prevention plan for the site or other permit conditions.

A2 11" x 17" PLAT:

Refer to Site Plan

A3 PROJECT NARRATIVE:

This project consists of the construction of the development of approximately 7.6 acres in Westfield, Indiana. The development includes the construction of a skilled care and assisted living facility including infrastructure, not limited to the following activities: removal and stockpiling of topsoil and installation of sanitary sewers and laterals, water laterals, storm sewers, and other utilities. The site shall be paved and landscaped.

The drainage plans for the site include a storm sewer designed for conveyance of 10-year flood discharges to two proposed detention pond along the southern and northern property lines.

A4 VICINITY MAP:

Refer to Title Sheet

A5 LEGAL DESCRIPTION OF PROJECT SITE:

Record Description:

PROPERTY DESCRIPTION:

A part of the Northwest Quarter of Section 36, Township 19 North, Range 3 East of the Second Principal Meridian, in Washington Township, Hamilton County, Indiana, described as follows:

Commencing at the Northeast corner of the Northwest Quarter of said section; thence South 89 degrees 11 minutes 02 seconds West 905.68 feet along the north line of said quarter section to the point of beginning; thence South 0 degrees 20 minutes West 825.56 feet; thence South 88 degrees 50 minutes 13 seconds West 398.77 feet; thence North 0 degrees 20 minutes 06 seconds East 827.98 feet to the aforementioned north line; thence North 89 degrees 11 minutes 02 seconds East 398.71 feet along said north line to the point of beginning and containing 7.566 acres more or less:

A6 LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS:

The site will not be subdivided; therefore, there are no individual lots on the property. The Site Plan shows the proposed site improvements.

A7 HYDROLOGIC UNIT CODE (HUC):

05120201090030

A8 STATE AND FEDERAL WATER QUALITY PERMITS:

None are required for this project.

A9 SPECIFIC POINT WHERE STORMWATER DISCHARGE WILL LEAVE THE SITE:

Stormwater drainage from the site will be conveyed by a proposed storm sewer to two proposed detention ponds located along the southern and northern sides of the site. The ultimate receiving waters for the detention pond is Cool Creek-Grossy Branch/Little Cool Creek.

A10 LOCATION AND NAME OF ALL WETLANDS, LAKES, AND WATERCOURSES ON AND ADJACENT TO THE SITE:

Cool Creek Drain is located west of the project site.

A11 IDENTIFICATION OF ALL RECEIVING WATERS:

The ultimate receiving water is Cool Creek-Grossy Branch/Little Cool Creek.

A12 IDENTIFICATION OF ALL POTENTIAL DISCHARGES TO GROUND WATER:

There are no locations on site where surface water may be discharged into ground water.

A13 100-YEAR FLOODPLAINS, FLOODWAYS, AND FLOODWAY FRINGS:

The site does not lie within any floodplain, floodway, or floodway fringe. The information was obtained from Flood Insurance Rate Map Panel 18057C0120F dated February 19, 2003 for Hamilton County, Indiana.

A14 PRE-CONSTRUCTION AND POST-CONSTRUCTION ESTIMATE OF PEAK DISCHARGE:

Pre-construction 10-year discharge: 13.89 cfs
Post-construction 10-year discharge: 5.97 cfs

A15 ADJACENT LAND USE:

North: Park
East: Agricultural
South: Agricultural
West: Agricultural

A16 LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS:

Refer to the Erosion Control Plan for the construction limits

A17 IDENTIFICATION OF EXISTING VEGETATIVE COVER:

At this time, crop cover exists.

A18 SOILS MAP INCLUDING SOIL DESCRIPTION AND LIMITATIONS:

Soil information from the county Soil Survey is on the Erosion Control Plan. This site has Brookston siltly clay loam, Crosby silt loam, and Miami silt loam soils.

The suitability of the soils for dwellings with basements ranges from somewhat limited to very limited. The on-site soil will be treated as recommended by the geotechnical engineer if the conditions are unsuitable for the pavement system. Remedial treatments may include, but are not limited to, removal of unsuitable soil and backfilling with engineered material, installation of a geofabric within or under the pavement system, or treatment of the subgrade with lime.

The suitability of the soils for local roads and streets is listed as very limited. The on-site soil will be treated as recommended by the geotechnical engineer if the conditions are unsuitable for the pavement system. Remedial treatments may include, but are not limited to, removal of unsuitable soil and backfilling with engineered material, installation of a geofabric within or under the pavement system, or treatment of the subgrade with lime.

Other suitability or limitations of the soil for the other classifications of use listed in the table are not applicable to this project.

A19 LOCATIONS, SIZE, AND DIMENSIONS FOR PROPOSED STORMWATER SYSTEMS:

Locations of stormwater systems: See Grading Plan
Size of storm sewer: See Grading Plan
Details of storm inlets and manholes: See Site Details

A20 PLANS FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT:

Off site construction activities shall consist of connections to existing utility services.

A21 LOCATIONS OF PROPOSED SOIL STOCKPILES AND/OR BORROW/DISPOSAL:

Excess soil shall be immediately stockpiled and seeded and/or removed from the construction site in accordance with all applicable laws.

A22 EXISTING SITE TOPOGRAPHY:

Refer to the Existing Topography Plan Sheet.

A23 PROPOSED FINAL SITE TOPOGRAPHY:

Refer to the Grading Plan.

B1 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES:

The following potential pollutant sources may be associated with construction activities on site:

- 1. Material storage areas (more specifically described below).
2. Construction waste material.
3. Fuel storage areas and fueling stations.
4. Exposed soils.
5. Leaking vehicles and equipment.
6. Sanitary waste from temporary toilet facilities.
7. Litter.
8. Windblown dust.
9. Soil tracking off site from construction equipment.

The following construction materials will be staged or stored on site at various points during development of the site:

- 1. Structural fill.
2. Road Base.
3. Plastic drainage pipe.
4. Water main pipe and appurtenances.
5. Concrete drainage pipe.
6. Concrete culverts.
7. Precast concrete manholes.
8. Rock rip-rap.

B2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND-DISTURBING ACTIVITIES:

- 1. Install construction entrance.
2. Utilize the gravel construction entrance for installation of the perimeter silt fence. Add stone if needed. Post the NOI at the entrance. Add protection measures to existing inlets.
3. Install staging area, fueling station, material storage area and concrete truck washout.
4. Strip the top soil and grade.
5. Complete the cut and fill on the site. Final grade and seed the pond slopes. Install check dams or stabilize the slopes with erosion control blankets.
6. Prior to building construction install stone surface for paved areas.
7. Building pads left dormant for more than 15 days, must be temporarily seeded.
8. Install staging area for building materials. Start building construction.
9. Install storm sewer and other utilities. Provide inlet protection immediately upon completion of the inlet and install riprap outlet protection prior to installing outlets. Final grade and stabilize slopes when inlets are functioning.
10. Seed the perimeter of the site.
11. Complete utility installation, curbs, paving and building construction.
12. Install landscaping plant material and stabilize all disturbed areas.
13. Remove all erosion and sediment control practices when areas have a uniform grass cover.

B3 STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS:

Refer to the Erosion Control Plan for location and Erosion Control Details for details.

B4 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS:

Sheet flow areas will be protected by seed and mulch or hydroseeding. Erosion control blankets will be installed on sloped areas where the slope exceeds 6:1 (horizontal to vertical). Silt Fence will be installed to prevent sedimentation from leaving the site. Because lengths and heights of the slopes are small, more aggressive erosion control measures were not considered.

B5 SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS:

There are no proposed concentrated flow areas on-site.

Straw bales and silt fences will not be allowed as concentrated flow protection measures.

B6 STORM SEWER INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS:

The contractor shall install inlet protection in each inlet in paved areas and silt fence inlet protection around inlets in grass areas during construction. Refer to the Erosion Control Plan for locations and refer to Erosion Control Details for details.

Straw bales alone will not be allowed as inlet protection measures.

B7 RUNOFF CONTROL MEASURES:

Not applicable.

B8 STORMWATER OUTLET PROTECTION SPECIFICATIONS:

Stormwater outlets will be protected by riprap aprons. Refer to the Erosion Control Plan for locations and the Erosion Control Details for details.

B9 GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS:

Rip rap aprons at outlets will be utilized to prevent grade destabilization. Refer to Erosion Control Plan for locations and Erosion Control Details for details.

B10 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE:

The detention pond will provide a sediment removal function in addition to the primary function of controlling peak discharges from the site. Temporary or permanent surface stabilization required for thin or bare area that is inactive for 15 days or more.

B11 TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON:

Refer to the Erosion Control Details, within the Seasonal Soil Protection Chart.

B12 PERMANENT SURFACE STABILIZATION SPECIFICATIONS:

- A. Loosen lawn area to a minimum depth of 6 inches. Mix soil amendments and fertilizers with topsoil at rates specified. Organic soil amendments such as peat, compost or manure shall be applied at 2" depth evenly over soil and incorporated into the top 6" of topsoil. Provide fertilizer with percentage of nitrogen required to provide not less than 1 pound of actual nitrogen per 1,000 sq. ft. of lawn area and not less than 4 percent phosphoric acid and 2 percent potassium. At least 50 percent of nitrogen to be organic form. Delay mixing of fertilizer if planting will not follow piling of planting soil within a few days.
B. Fertilizer for lawns: provide a fast release fertilizer with a composition of 1 lb per 1,000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium by weight.
C. Slow-release fertilizer for trees and shrubs: granular fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorous and potassium made up of a composition by weight of 5 percent.
D. Grade lawn and grass areas to a smooth, even surface with loose, uniformly fine texture. Limit fine grading to areas that can be planted within immediate future. Remove trash, debris, stones larger than 1 inch diameter, and other objects that may interfere with planting or maintenance operations.
E. Sow seed using a spreader or seeding machine. Do not seed when wind velocity exceeds 5 miles per hour. Distribute seed evenly over entire area by sowing equal quantity in 2 directions at right angles to each other.
F. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with a fine spray.
G. Install erosion control blankets as indicated on the plan.
H. Protected seeded areas against erosion by spreading clean, seed-free straw mulch after completion of seeding operations. Spread uniformly to form a continuous blanket not less than 1-1/2 inches loose measurements over seeded areas.
I. Water newly planted lawn areas and keep moist until new grass is established. Immediately repair any lawn areas disturbed by construction activities including tree and shrub installation.
J. Refer to the Erosion Control Details, within the Seasonal Soil Protection Chart for timing of temporary and permanent seeding and grass seed specifications.

B13 MATERIAL HANDLING AND SPILL PREVENTION PLAN:

Solid Waste Disposal:

No solid material, including building materials, is permitted to be discharged to surface waters or buried on site. All solid waste materials, including disposable materials incidental to the construction activity, must be collected in containers or closed dumpster's. The collection containers must be emptied periodically and the collected material hauled to a landfill permitted by the State and/or appropriate local municipality to accept the waste for disposal.

A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper solid waste procedures.

Hazardous Waste:

Whenever possible, minimize the use of hazardous materials and generation of hazardous wastes. All hazardous waste materials will be disposed in the manner specified by federal, state, or local regulations or by the manufacturer.

Use containment berms in fueling and maintenance areas and where potential for spills is high.

A foreman or supervisor should be designated in writing to oversee, enforce and instruct construction workers on proper hazardous waste procedures. The location of any hazardous waste storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the facility.

Dust Control/Off-Site Vehicle Tracking:

During construction, water trucks should be used, as needed, by each contractor or subcontractor to reduce dust. After construction, the site should be stabilized to reduce dust.

Construction traffic should enter and exit the site at a Construction Entrance with a rock pad or equivalent device. The purpose of the rock pad is to minimize the amount of soil and mud that is tracked onto existing streets. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts.

Sanitary/Septic:

Contractors and subcontractors must comply with all state and local sanitary sewer, portable toilet, or septic system regulations. Sanitary facilities shall be provided at the site by each contractor or subcontractor throughout construction activities. The sanitary facilities should be utilized by all construction personnel and be serviced regularly. All expenses associated with providing sanitary facilities are the responsibility of the contractors and subcontractors. The location of any sanitary facilities should be indicated on the stormwater pollution prevention plan by the operator following on-site location of said facilities.

Water Source:

Water used to establish and maintain grass, to control dust, and for other construction purposes must originate from a public water supply or private well approved by the State or local health department.

Equipment Fueling and Storage Areas:

Equipment fueling, maintenance, and cleaning should only be completed in protected areas (i.e., bermed area). Leaking equipment and maintenance fluids will be collected and not allowed to discharge onto soil where they may be washed away during a rain event.

Equipment wash down (except for wheel washes) should take place within an area surrounded by a berm. The use of detergents is prohibited.

Hazardous Material Storage:

Chemicals, paints, solvents, fertilizers, and other toxic or hazardous materials should be stored in their original containers (if original container is not resealable, store the products in clearly labeled, waterproof containers). Except during application, the containers should be kept in trucks or in bermed areas within covered storage facilities. Runoff containing such materials shall be collected, removed from the site, and disposed of in accordance with the federal, state, and local regulations.

As may be required by federal, state or local regulations, the Contractor should have a Hazardous Materials Management Plan and/or Hazardous Materials Spill and Prevention Program in place. A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper hazardous materials storage and handling procedures. The location of any hazardous material storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the storage areas.

Material Handling and Spill Prevention:

Discharge of hazardous substances or oil into stormwater is subject to reporting requirements. In the event of a spill of a hazardous substance, the operator is required to notify the National Response Center (1-800-424-8802) to properly report the spill. In addition, the operator shall submit a written description of the release (including the type and amount of material released, the date of the release, the circumstances of the release, and the steps to be taken to prevent future spills) to the local Soil and Water Conservation District. The SWPPP must be revised within 14 calendar days after the release to reflect the release, stating the information above along with modifications to minimize the possibility of future occurrences. Each contractor and subcontractor is responsible for complying with these reporting requirements.

Concrete Washout:

All concrete trucks waste material shall be completely contained and disposed in accordance with all local, state, and federal regulations. A pit or container is required when cleaning concrete chutes.

Spill Response Plan:

Minor - Small spills that typically involve oil gasoline, paint, hydraulic fluid etc. Minor spills can be controlled by the first responder at the discovery of the spill.
• Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury.
• Use absorbent material to clean-up spill material and any subsequently contaminated soil and dispose of properly.

Semi-significant Spills - Approximately ten gallons or less of pollutant with no contamination of ground or surface waters. Minor spills can be generally controlled by the first responder with help from other site personnel. This response may require other operations to stop to make sure the spill is quickly and safely addressed. At the discovery of the spill:
• Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury.
• Use absorbent material to clean-up spills and dispose of properly. Spills on impervious surfaces should be contained with a dry absorbent. Spills on clayey soils should be contained by constructing an earthen dike and should be disposed of as soon as possible to prevent migration deeper into the soil and groundwater. Dispose of contaminated soils or absorbents properly.
• Contact 911 if this spill could be a safety issue.
• Contact supervisors and designated inspectors immediately
• Contaminated solids to be removed to an approved landfill.

Major or Hazardous Spills - More than ten gallons, there is the potential for death, injury or illness to humans or animals or has the potential for environmental or groundwater pollution.
• Control or contain the spill without risking bodily harm. Temporarily plug storm drains if possible to prevent migration of the spill into the stormwater system.
• Immediately contact the local Fire Department at 911 to report any hazard material spill.
• Contact supervisors and designated inspectors immediately. Other county or municipal officials (City of Westfield Engineering Department) responsible for storm water facilities should be contacted as well. The contractor is responsible for having these contact numbers available at the job site. A written report should be submitted to the owner as soon as possible.
• As soon as possible but within 2 hours of discovery, contact the Department of Environmental Management, Office of Emergency Response 1-888-233-7745. The following information should be noted for future reports to IDEM or the National Response Center.
o Name, address and phone number of person making the spill report
o The location of the spill
o The time of the spill
o Identification of the spilled substance
o Approximate quantity of the substance that has been spilled or may be further spilled
o The duration and source of the spill
o Name and location of the damaged waters
o Name of spill response organization
o What measures were taken in the spill response
o Other information that may be significant

Additional regulation or requirements may be present. A spill response professional should be consulted to make sure all appropriate and required steps have been taken. Contaminated solids should only be removed from the site after approval is given by Emergency Response.

B14 MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED STORMWATER QUALITY MEASURE:

Inspection Schedule/Reporting:

All impacted areas, as well as all erosion and sediment control devices, will be inspected every seven (7) calendar days and within 24 hours after a rainfall of 0.5 inch or greater. Where sites have been final or temporarily stabilized or on sites where runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or frozen ground exists), such inspections shall be conducted at least once every month.

Inspections shall be conducted and a written report prepared, by a designated and qualified person familiar with the USEPA NPDES Storm Water General Permit, this SWPPP, and the Project.

Inspection reports shall be completed including scope of the inspection, name(s) and qualifications of personnel making the inspection, the date of the inspection, observations relating to the implementation of the SWPPP, and any actions taken as a result of incidents of noncompliance during the inspection. The inspection report should state whether the site was in compliance or identify any incidents of noncompliance. The contractor shall keep a copy of the inspection reports on site and permanently for a period of two years following construction. The on-site reports may be requested by inspections conducted by the local Soil and Water Conservation District.

Construction Entrance Inspections:

Locations where vehicles exit the site shall be inspected for evidence of off-site sediment tracking. Each contractor and subcontractor shall be responsible for maintaining the Construction Entrance and other controls as described in this SWPPP.

Material Storage Inspections:

Inspectors must evaluate areas used for storage of materials that are exposed to precipitation. The purpose is to ensure that materials are protected and/or impounded so that pollutants cannot discharge from storage areas. Off-site material storage areas used solely by the subcontractor are considered to be part of the project and must be included in the erosion control plans and the site inspection reports.

Soil Stabilization Inspections:

Seeded areas will be inspected to confirm that a healthy stand of vegetation is maintained. The site has achieved final stabilization once all areas are covered with pavement or have a stand of vegetation with at least 70% of the background vegetation density. The density of 70% or greater must be maintained to be considered as stabilized. The operator or their representative will water, fertilize, and reseed disturbed areas as needed to achieve this goal.

Erosion and Sediment Control Inspections:

All controls should be inspected at least once every seven (7) calendar days and following any storm event of 0.5 inch or greater. The following is a list of inspection/maintenance practices that will be used for specific controls:

- 1. Geotextiles/Erosion Control Mats: Missing or loose matting must be replaced or re-anchored.
2. Inlet Protection: Sediment should be removed when it reaches approximately one-half the height of the fence. If a sump is used, sediment should be removed when the volume of the basin is reduced by 50%.
3. Diversion Swales: Clean debris or other obstructions as needed. Damage from storms or normal construction activities (i.e., tire ruts) shall be repaired immediately.
4. Mulching: Inspect for thin or bare spots caused by natural decomposition or weather-related events. Mulch in high

traffic area should be replaced on a regular basis to maintain uniform protection.
5. Sediment Trap: Accumulated silt shall be removed and the basin shall be regarded to its original dimensions at such point that the capacity of the impoundment has been reduced to one-half of its original storage capacity. The removed sediment shall be stockpiled or redistributed in areas that are protected from erosion.

6. Sediment Basin: Inspect frequently to check for damage and to ensure obstructions are not diminishing the effectiveness of the structures. Sediment shall be removed and the basin shall be regarded to its original dimensions at such point that the capacity of the impoundment has been reduced to 20% of its original storage capacity. The removed sediment shall be stockpiled or redistributed in areas that are protected from erosion.

7. Silt Fence: Removal of built-up sediment will occur when the sediment reaches one-third the height of the fence.
8. Stabilized Construction Entrance: Periodic regarding and top dressing with additional stones.
9. Straw Bales: Replace straw bales that show signs of deterioration.

10. Vegetation: Protect newly seeded areas from excessive runoff and traffic until vegetation is established. Establish a watering and fertilizing schedule.
11. Good Housekeeping: Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges through screening of outfalls and daily pickup of litter.

In the event that sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize adverse impacts. An example of this may be the situation where sediment has washed into the street and could be carried into the storm sewers by the next rainfall and/or pose a safety hazard to users of public streets.

Modifications/Revisions to SWPPP:

Based on inspection results, any necessary modification to this SWPPP shall be implemented within seven (7) calendar days of the inspection. A modification is necessary if a control measure or operational procedure does not provide adequate pollutant control. All revisions shall be recorded on a Record of Revisions within seven calendar days of the inspection.

It is the responsibility of the operator to maintain effective pollutant discharge controls. Physical site conditions or contractor/subcontractor practices could make it necessary to install more controls than were originally planned. For example, localized concentrations of surface runoff or unusually steep areas could require additional silt barrier or other structural controls. Assessing the need for and installing additional controls will be a continuing contractor/subcontractor responsibility until final stabilization is achieved. Contractors and subcontractors implementing this SWPPP must remain alert to the need to periodically refine and update this SWPPP in order to accomplish the intended goals.

Notice of Termination:

Compliance of the site with the General Construction Permit remains the responsibility of all operators that have submitted an NOI until such time as they have submitted a Notice of Termination (NOT). The permittee's authorization to discharge under the General Construction Permit terminates at midnight of the day the NOT is signed.

All permittees must submit an NOI within thirty (30) days after one or more of the following conditions have been met:

- 1. Final stabilization has been achieved on all portions of the site for which the permittee was responsible.
2. Another operator/permittee has assumed control over all areas of the site that have not been finally stabilized.
3. In residential construction operations, temporary stabilization has been completed and the residence has been transferred to the homeowner.

B15 EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS:

Since the entire site is under a single ownership, there are not any individual building lots.

C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE:

The proposed land use is for a skilled care and assisted living facility. The pollutants and sources of each pollutant normally expected from this type of land use are listed below:

Pollutant Source: Passenger vehicles, delivery vehicles.
Type of Pollutant: Oil, gasoline, diesel fuel, any hydrocarbon associated with vehicular fuels and lubricants, grease, antifreeze, windshield cleaner solution, brake fluid, brake dust, rubber, glass, metal and plastic fragments, grit, road de-icing materials.

Pollutant Source: Nursing home.
Type of Pollutant: Cleaning solutions or solvents, leaks from HVAC equipment, grit from roof drainage, aggregate or rubber fragments from roofing system.

Pollutant Source: Trash dumpster.
Type of Pollutant: Cleaning solutions or solvents, litter (paper, plastic, general refuse associated with distribution operations), uneaten food products, bacteria.

Pollutant Source: Parking lot.
Type of Pollutant: Any pollutant associated with vehicular sources, grit from asphalt wearing surface, bituminous compounds from periodic maintenance (sealing, resurfacing and patching), pavement de-icing materials, paint fragments from parking stall stripes, concrete fragments, wind-blown litter from off-site sources, elevated water temperatures from contact with impervious surfaces.

Pollutant Source: Lawn and landscape areas.
Type of Pollutant: Fertilizers, soil, organic material (leaves, mulch, grass clippings)

The anticipated pollutant sources are the vehicles that will use facility, including both delivery trucks and passenger vehicle traffic. Possible pollutants include oil, gasoline, anti-freeze and other pollutants associated with vehicular traffic.

C2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION:

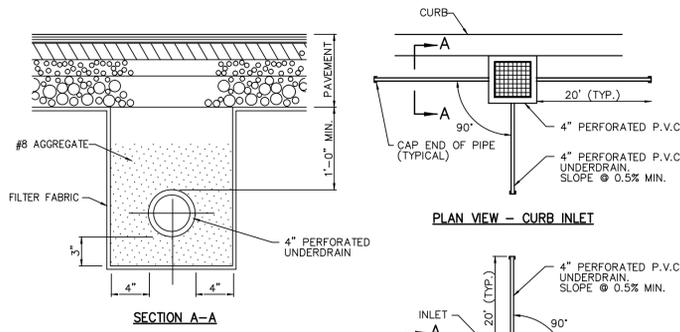
The stormwater detention ponds will remain in place as permanent features after construction is completed. Although the purpose of the ponds is to restrict stormwater discharges, they will provide an incidental sediment removal function.

Oils, grease, brake fluid and gasoline spilled on-site shall be immediately absorbed with products such as perlite vermiculite, sand or polypropylene and disposed of in accordance with local regulations.

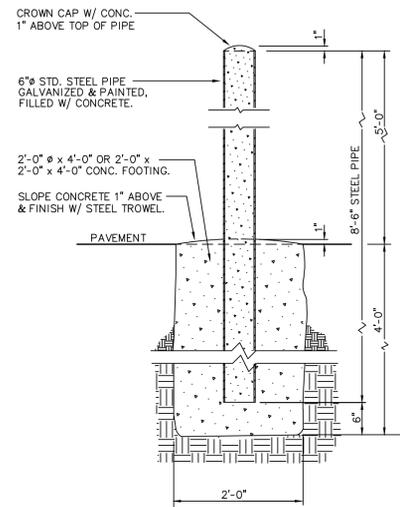
C3 DESCRIPTION OF PROPOSED POST-CONSTRUCTION STORMWATER QUALITY MEASURES:

Grading and Drainage:

Top soil will be placed in lawn areas and seeded with grass and graded; not to exceed 3:1 slopes. proposed landscape trees and shrubs shall also be added

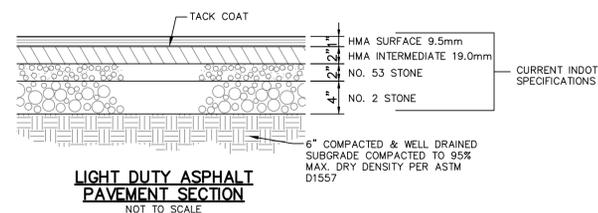


PAVEMENT UNDERDRAIN DETAIL
NOT TO SCALE

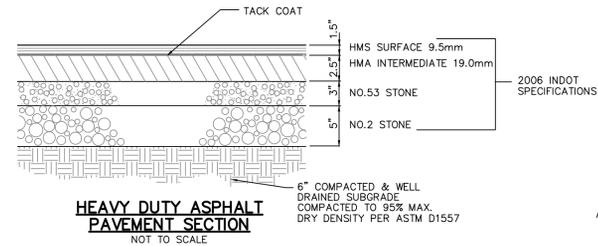


NOTE:
CONTRACTOR SHALL PROVIDE PIPE BOLLARDS AT 6'-0" O.C. (maximum spacing) AT ALL GAS METERS, ELECTRICAL TRANSFORMERS, ELECTRICAL SWITCH GEAR, MECHANICAL UNITS AND OTHER SUCH DEVICES WHICH ARE EXPOSED TO TRUCK OR AUTOMOBILE TRAFFIC. CONTRACTOR SHALL PROVIDE A MINIMUM OF TWO (2) BOLLARDS AT EACH DRIVE

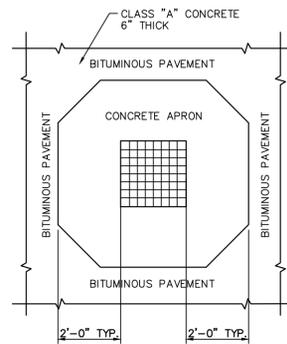
6" STD. STEEL PIPE BOLLARD
NOT TO SCALE



LIGHT DUTY ASPHALT PAVEMENT SECTION
NOT TO SCALE

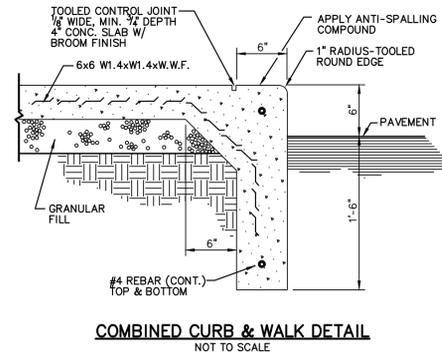


HEAVY DUTY ASPHALT PAVEMENT SECTION
NOT TO SCALE

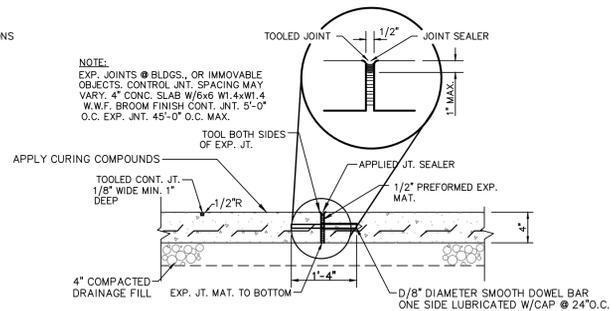


NOTE:
2" MAX. FROM OUTSIDE EDGE OF CASTING

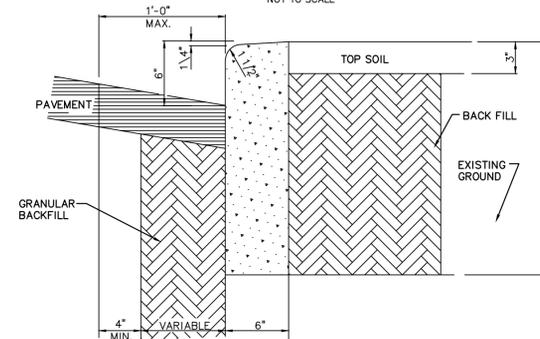
INLET APRON DETAIL
NOT TO SCALE



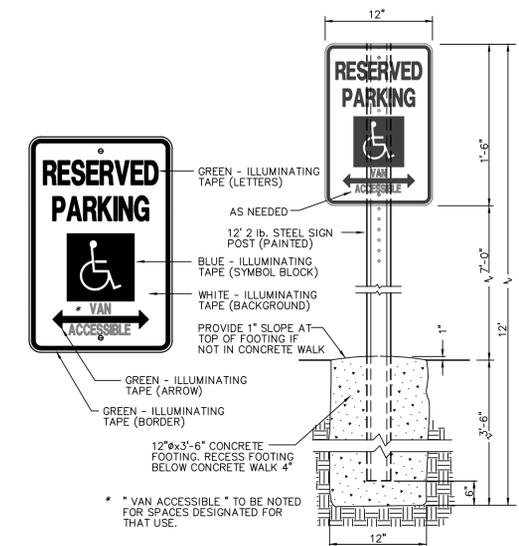
COMBINED CURB & WALK DETAIL
NOT TO SCALE



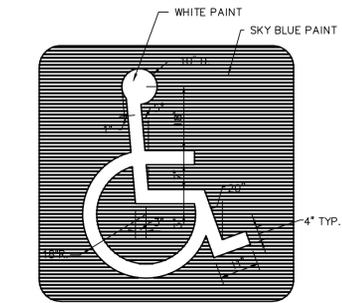
CONTROL & EXPANSION JOINT AND 4" SIDEWALK DETAIL
NOT TO SCALE



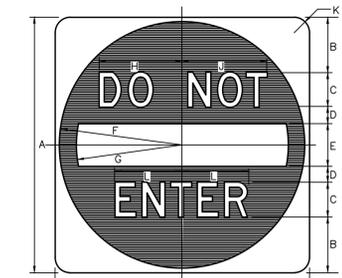
6" CONCRETE CURB
NOT TO SCALE



ADA ACCESSIBLE PARKING SIGN DETAIL
NOT TO SCALE



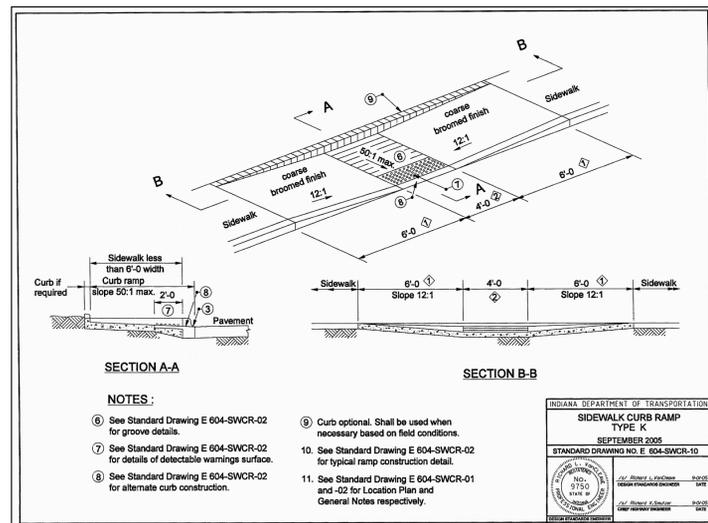
HANDICAP PARKING SYMBOL DETAIL
NOT TO SCALE



A	B	C	D	E	F	G	H	J	K	L
30	6.5	4D	2	5	14.5	12.5	9.75	10	1.875	1.875
36	7.5	5D	2.5	6	17.5	15	12	12.375	2.25	1.813
48	11	6D	3	8	23.5	20	14.5	15	3	11.75

COLORS:
SYMBOL - RED (REFLECTIVE)
LEGEND & BACKGROUND - WHITE (REFLECTIVE)

DO NOT ENTER SIGN DETAIL
NOT TO SCALE



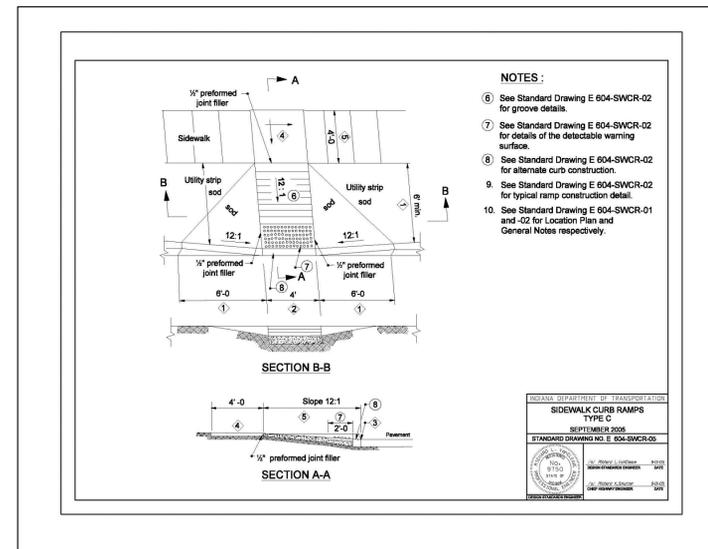
SECTION A-A

SECTION B-B

NOTES:

- See Standard Drawing E 604-SWCR-02 for groove details.
- Curb optional. Shall be used when necessary based on field conditions.
- See Standard Drawing E 604-SWCR-02 for details of detectable warnings surface.
- See Standard Drawing E 604-SWCR-02 for alternate curb construction.
- See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.
- See Standard Drawing E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.

INDIANA DEPARTMENT OF TRANSPORTATION
SIDEWALK CURB RAMP
TYPE K
SEPTEMBER 2005
STANDARD DRAWING NO. E 604-SWCR-10



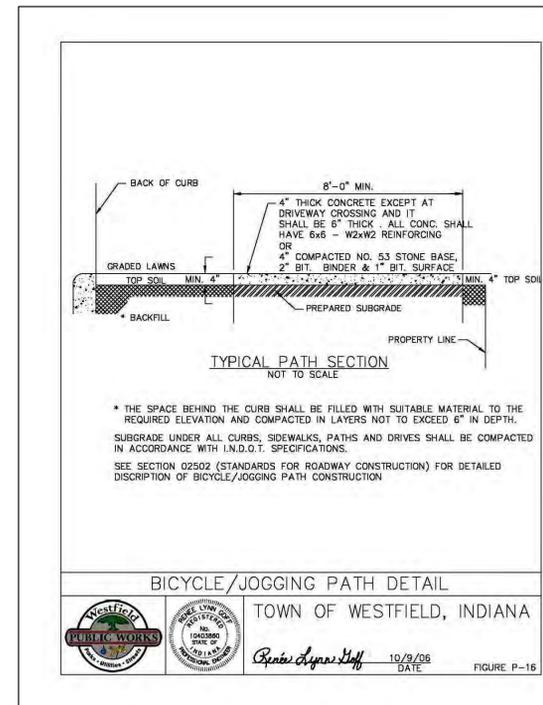
SECTION A-A

SECTION B-B

NOTES:

- See Standard Drawing E 604-SWCR-02 for groove details.
- See Standard Drawing E 604-SWCR-02 for details of the detectable warning surface.
- See Standard Drawing E 604-SWCR-02 for alternate curb construction.
- See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.
- See Standard Drawing E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.

INDIANA DEPARTMENT OF TRANSPORTATION
SIDEWALK CURB RAMP
TYPE C
SEPTEMBER 2005
STANDARD DRAWING NO. E 604-SWCR-09



TYPICAL PATH SECTION
NOT TO SCALE

* THE SPACE BEHIND THE CURB SHALL BE FILLED WITH SUITABLE MATERIAL TO THE REQUIRED ELEVATION AND COMPACTED IN LAYERS NOT TO EXCEED 6" IN DEPTH. SUBGRADE UNDER ALL CURBS, SIDEWALKS, PATHS AND DRIVES SHALL BE COMPACTED IN ACCORDANCE WITH I.N.D.O.T. SPECIFICATIONS.

SEE SECTION 02502 (STANDARDS FOR ROADWAY CONSTRUCTION) FOR DETAILED DISCUSSION OF BICYCLE/JOGGING PATH CONSTRUCTION

BICYCLE/JOGGING PATH DETAIL
TOWN OF WESTFIELD, INDIANA
10/2/08
FIGURE P-16

7280 SHADELAND STATION
INDIANAPOLIS, IN 46226-3957
TEL 317.547.5580 FAX 317.543.0270
www.structurepoint.com

AMERICAN STRUCTUREPOINT INC.

REGISTERED PROFESSIONAL ENGINEER
STATE OF INDIANA
No. 10606572

CERTIFIED BY

PREPARED FOR:
MAINSTREET PROPERTY GROUP, LLC
109 W. JACKSON STREET
CICERO, INDIANA 46034

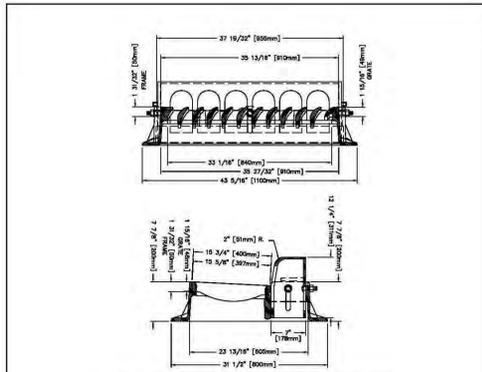
PROJECT:
MAINSTREET HEALTH AND WELLNESS SUITES OF WESTFIELD WESTFIELD, INDIANA

SITE DETAILS

DATE: 02/03/12
DRAWN BY: PED
CHK'D BY: KDK
JOB NO. 201100738

REVISIONS

SHEET NO.
C6.1
OF

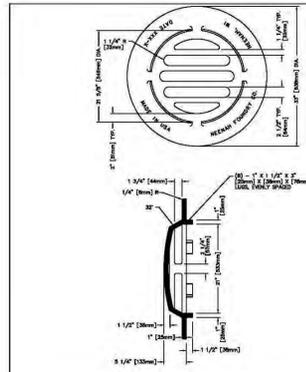


NEENAH R-3287-10V
EAST JORDAN 7505 M1 & T2

* OR APPROVED BY WESTFIELD PUBLIC WORKS DEPARTMENT
** STORM SEWER CASTINGS MANHOLE COVERS, BEEHIVE INLETS, CURB INLETS OR OTHER APPROVED CASTING SHALL HAVE THE FOLLOWING PHRASES CAST IN RECESSED LETTERS TWO (2) INCHES IN HEIGHT:
A. "STORM SEWER"
B. "DRAINS TO RIVER" OR "DRAINS TO WATERWAY"
C. "DUMP NO WASTE"
D. OTHER PHRASES SHALL REQUIRE APPROVAL OF THE WESTFIELD PUBLIC WORKS DEPARTMENT.

CHAIR BACK CURB INLET CASTING

Westfield PUBLIC WORKS
TOWN OF WESTFIELD, INDIANA
Benis Lynn Hoff 4/10/06 DATE FIGURE ST-8

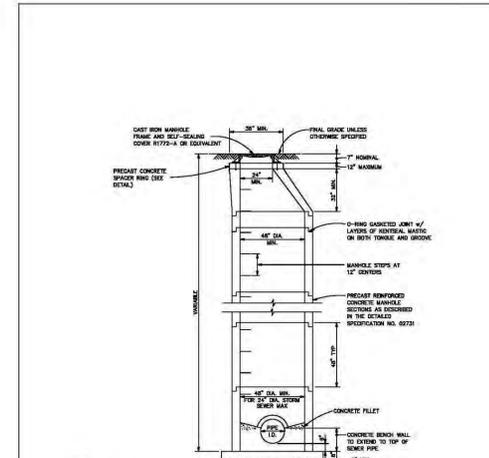


NEENAH R-4342
EAST JORDAN 6489

* OR APPROVED BY WESTFIELD PUBLIC WORKS DEPARTMENT
** STORM SEWER CASTINGS MANHOLE COVERS, BEEHIVE INLETS, CURB INLETS OR OTHER APPROVED CASTING SHALL HAVE THE FOLLOWING PHRASES CAST IN RECESSED LETTERS TWO (2) INCHES IN HEIGHT:
A. "STORM SEWER"
B. "DRAINS TO RIVER" OR "DRAINS TO WATERWAY"
C. "DUMP NO WASTE"
D. OTHER PHRASES SHALL REQUIRE APPROVAL OF THE WESTFIELD PUBLIC WORKS DEPARTMENT.

BEEHIVE CURB INLET CASTING

Westfield PUBLIC WORKS
TOWN OF WESTFIELD, INDIANA
Benis Lynn Hoff 4/10/06 DATE FIGURE ST-10

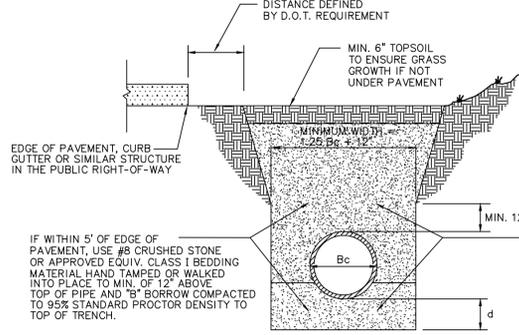


LEGEND
Bc= OUTSIDE DIAMETER
D= INSIDE DIAMETER
d= DEPTH OF BEDDING MATERIAL BELOW PIPE

DEPTH OF BEDDING MATERIAL BELOW PIPE
D d (MIN)
27" & SMALLER 4
30" TO 60" 4
66" & LARGER 4

STANDARD STORM MANHOLE DETAIL

Westfield PUBLIC WORKS
TOWN OF WESTFIELD, INDIANA
Benis Lynn Hoff 4/10/06 DATE FIGURE ST-1

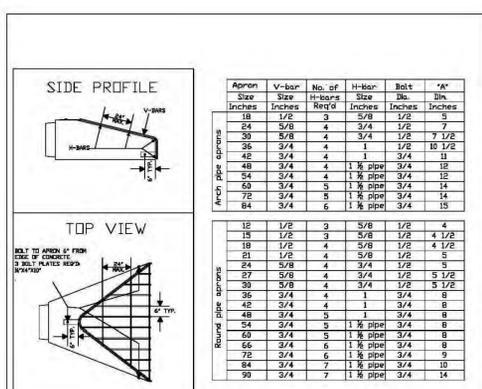


LEGEND
Bc= OUTSIDE DIAMETER
D= INSIDE DIAMETER
d= DEPTH OF BEDDING MATERIAL BELOW PIPE

DEPTH OF BEDDING MATERIAL BELOW PIPE
D d (MIN)
27" & SMALLER 4
30" TO 60" 4
66" & LARGER 4

PLASTIC PIPE (PVC & HDPE) BEDDING DETAIL

NOT TO SCALE

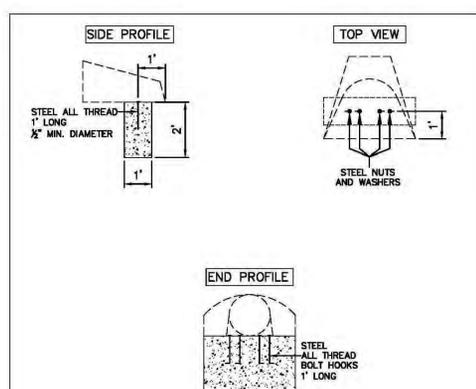


Apron Size	V-bar Size	No. of V-bars	W-bar Size	Bolt Size	"A" Size
18	1/2"	3	3/8"	1/2"	4
24	3/8"	4	3/4"	1/2"	4 1/2
30	3/8"	4	3/4"	1/2"	5
36	3/4"	4	1"	1/2"	5 1/2
42	3/4"	4	1"	3/4"	6
48	3/4"	4	1 1/8" pipe	3/4"	8
54	3/4"	4	1 1/8" pipe	3/4"	8
60	3/4"	5	1 1/8" pipe	3/4"	8
66	3/4"	6	1 1/8" pipe	3/4"	8
72	3/4"	6	1 1/8" pipe	3/4"	9
84	3/4"	7	1 1/8" pipe	3/4"	10
90	3/4"	7	1 1/8" pipe	3/4"	14

NOTES:
1. BARS & PLATES ARE HOT-ROLLED STEEL.
2. BARS, PLATES, & PIPES ARE FINISHED WITH 2 COATS OF ALUMINUM PAINT.
3. BOLTS ARE GALVANIZED.
4. NO REBAR THROUGH PIPES WILL BE ALLOWED.
5. DEBRIS GUARD SHALL BE REMOVABLE.

DEBRIS GUARD

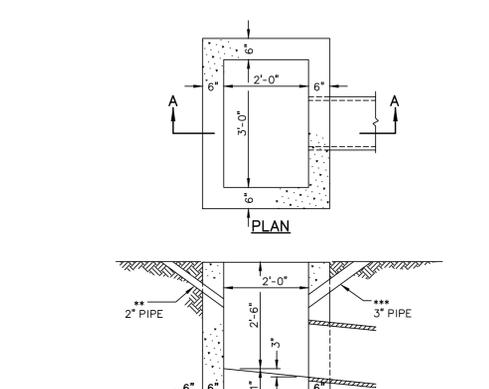
Westfield PUBLIC WORKS
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Benis Lynn Hoff 4/10/06 DATE FIGURE ST-29



ALLTHREAD SPACING TO BE TWO PER FOOT
EX: 12" END SECTION = 2 ALLTHREAD
24" END SECTION = 4 ALLTHREAD

ANCHOR FOR CONCRETE END SECTIONS

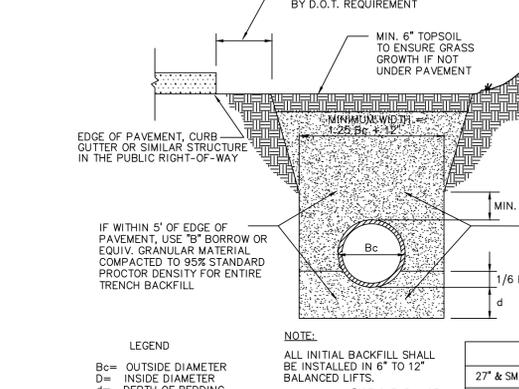
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** 2" PIPE DRAIN FROM BOTTOM OF CURB TO INLET AGGREGATE TO BE PLACED AROUND INLET END OF PIPE
*** 3" MIN. DIA. PIPE TO BE KEPT OPEN FOR DRAINAGE OF SUBGRADE OR BASE UNTIL SURFACE IS PLACED.

TYPE "J" INLET

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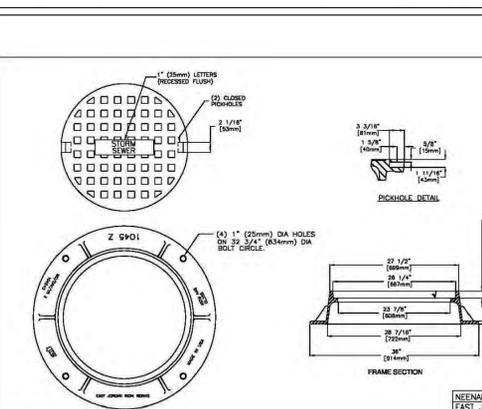


LEGEND
Bc= OUTSIDE DIAMETER
D= INSIDE DIAMETER
d= DEPTH OF BEDDING MATERIAL BELOW PIPE

DEPTH OF BEDDING MATERIAL BELOW PIPE
D d (MIN)
27" & SMALLER 3
30" TO 60" 4
66" & LARGER 6

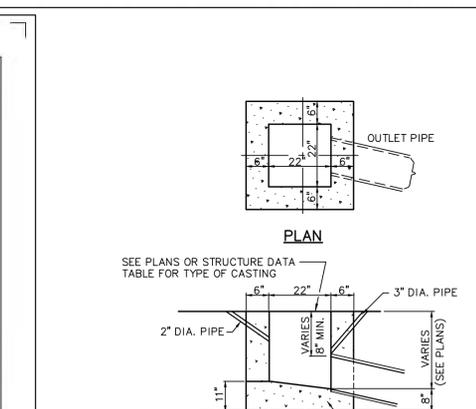
REINFORCED CONCRETE PIPE (RCP) BEDDING DETAIL

NOT TO SCALE



MANHOLE SOLID LID CASTING

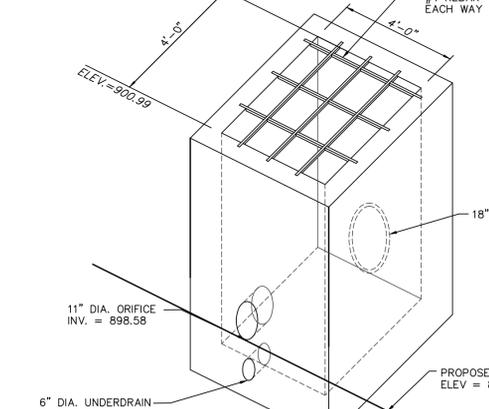
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Benis Lynn Hoff 2/23/07 DATE FIGURE ST-7



NOTE:
ONLY PRECAST OR POURED IN PLACE PERMITTED

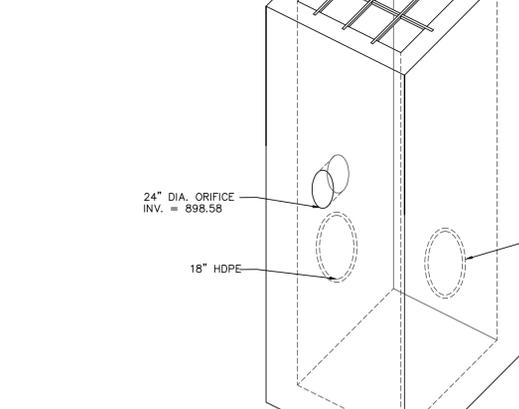
INLET TYPE "A"

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POND OUTLET STRUCTURE #9 DETAIL

NOT TO SCALE



POND OUTLET STRUCTURE #19 DETAIL

NOT TO SCALE

Z80 SHADELAND STATION
INDIANAPOLIS, IN 46256-3957
TEL 317.547.5580 FAX 317.543.0270
www.structurepoint.com
AMERICAN STRUCTUREPOINT INC.

KEVIN D. KRUK
REGISTERED No. 10606572
STATE OF INDIANA
PROFESSIONAL ENGINEER
CERTIFIED BY

PREPARED FOR:
MAINSTREET PROPERTY GROUP, LLC
109 W. JACKSON STREET
CICERO, INDIANA 46034

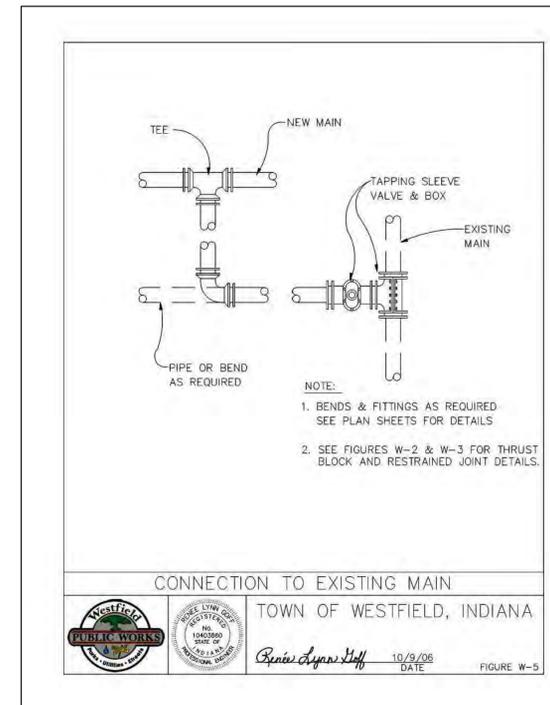
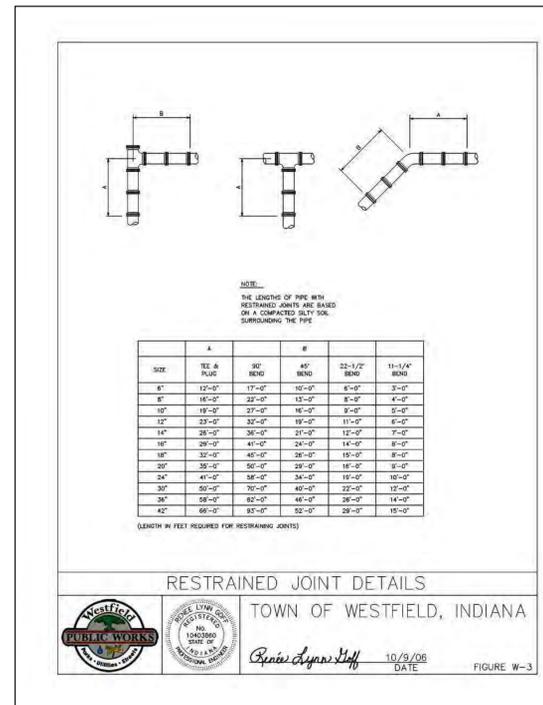
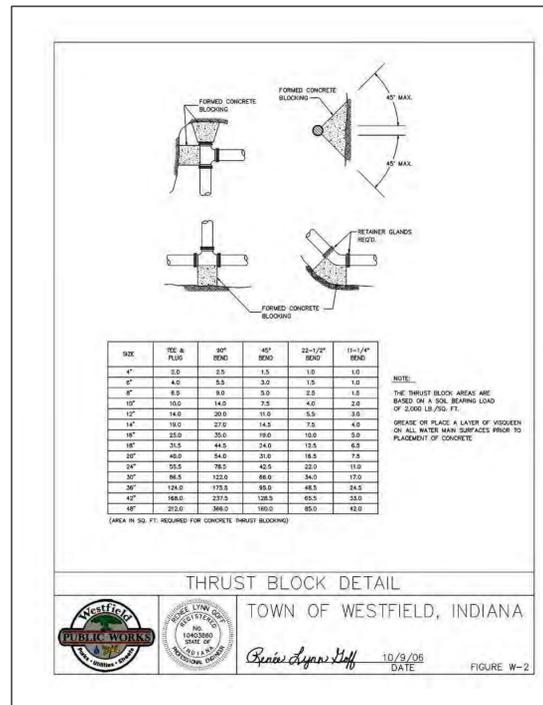
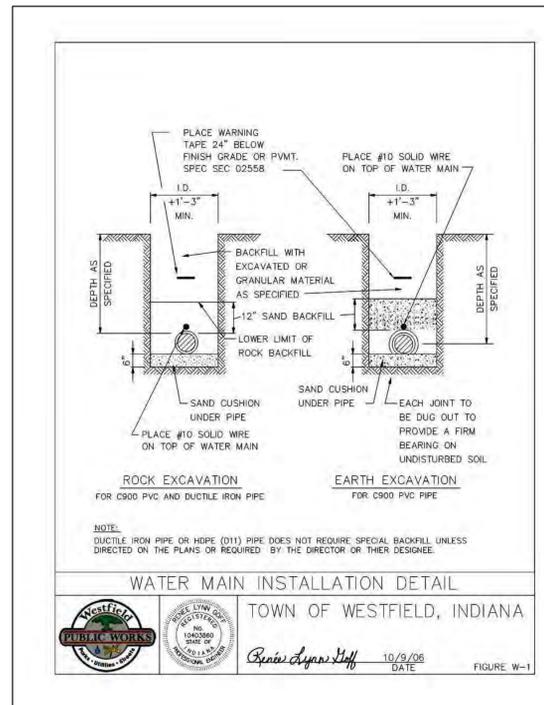
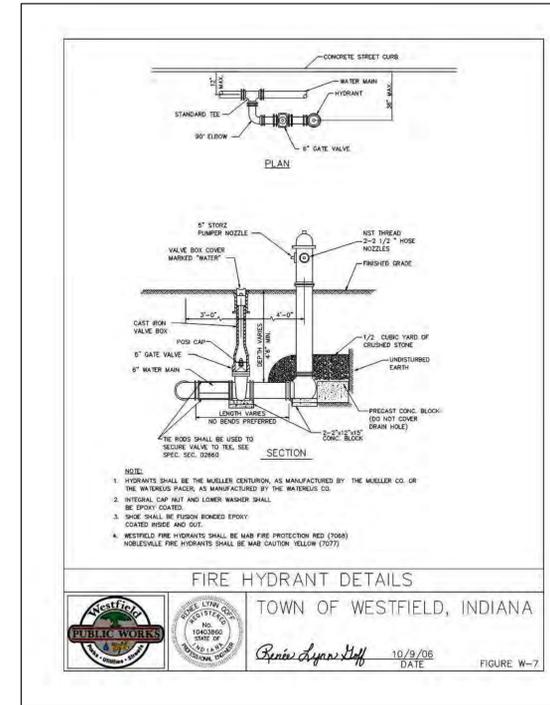
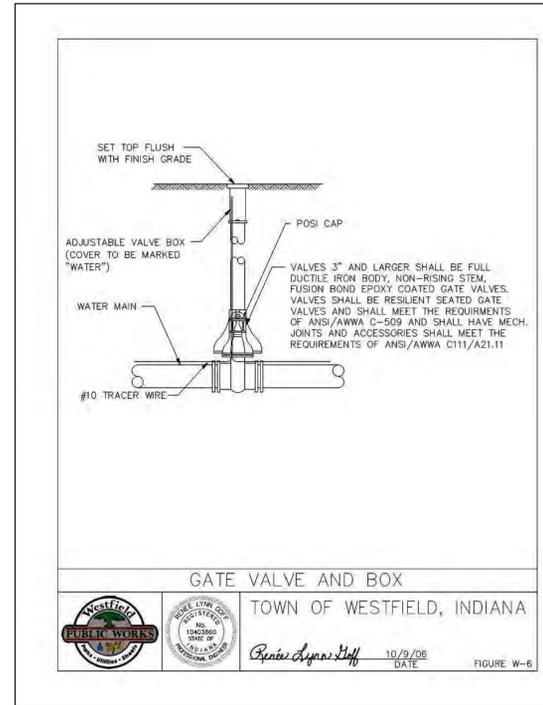
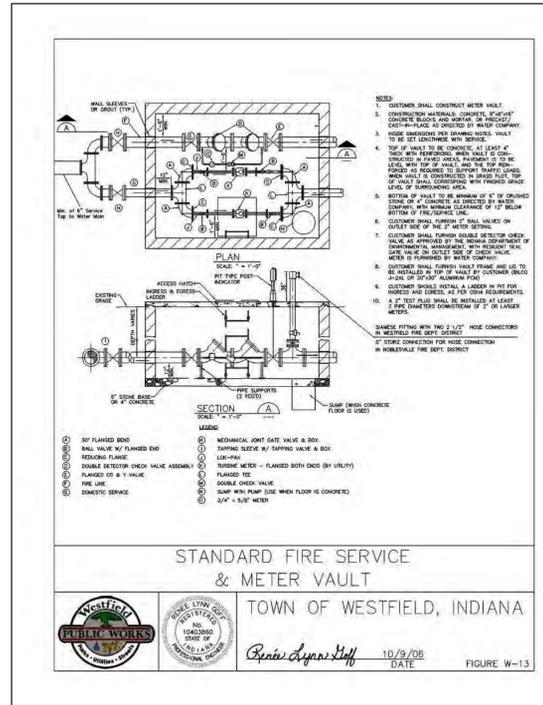
PROJECT:
MAINSTREET HEALTH AND WELLNESS SUITES OF WESTFIELD WESTFIELD, INDIANA

DATE: 02/03/12
DRAWN BY: PED
CHK'D BY: KDK
JOB NO. 201100738

REVISIONS

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7260 SHADELAND STATION
INDIANAPOLIS, IN 46226-3957
TEL: 317.547.5580 FAX: 317.543.0270
www.structurepoint.com

AMERICAN
STRUCTUREPOINT
INC.

REGISTERED
No. 10606572
STATE OF INDIANA
PROFESSIONAL ENGINEER

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109 W. JACKSON STREET
CICERO, INDIANA 46034

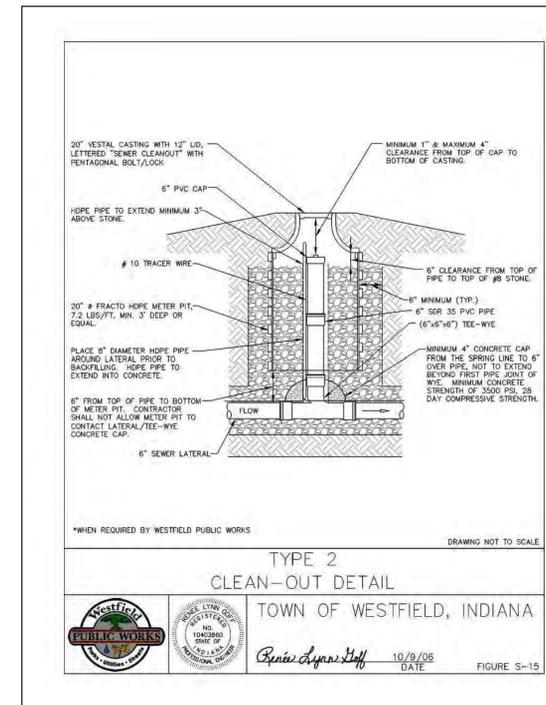
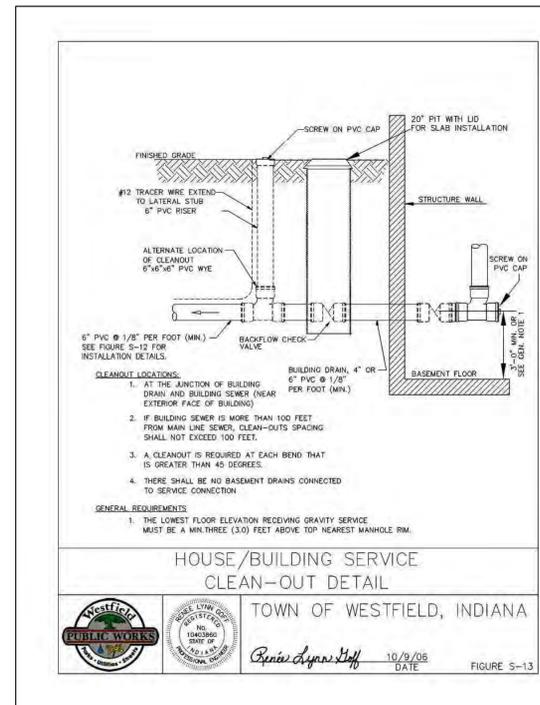
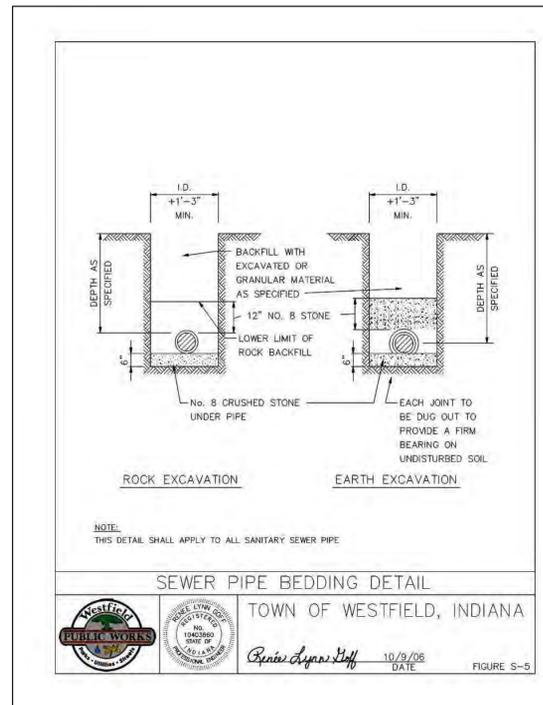
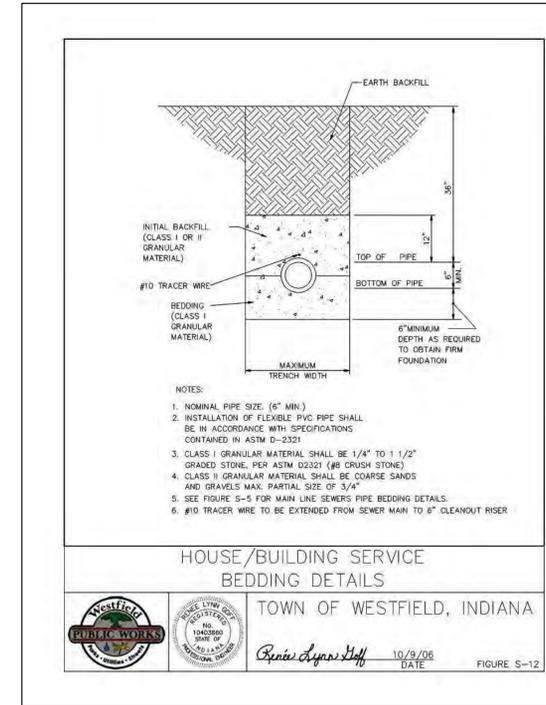
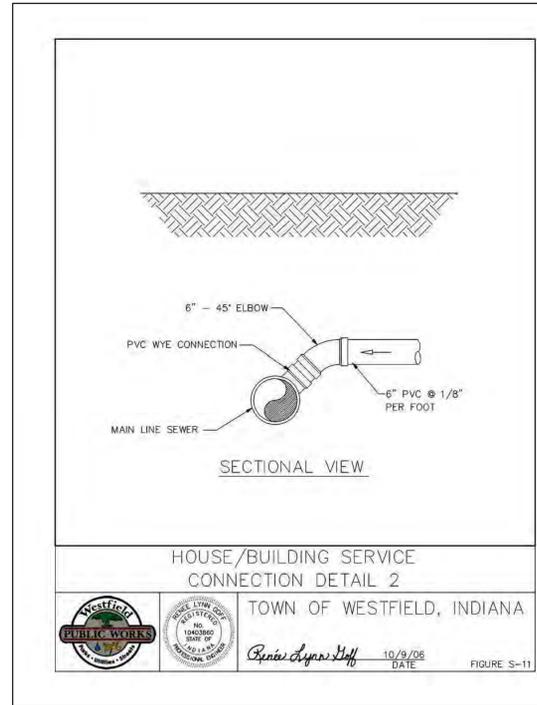
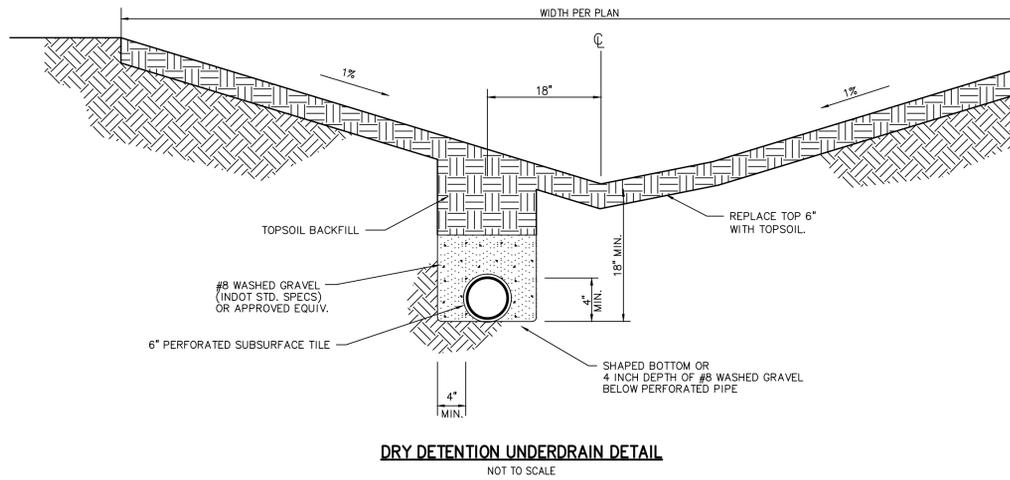
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DATE:	02/03/12
DRAWN BY:	PED
CHK'D BY:	KDK
JOB NO.	201100738

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7260 SHADELAND STATION
INDIANAPOLIS, IN 46226-3957
TEL 317.547.5580 FAX 317.543.0270
www.structurepoint.com

AMERICAN STRUCTUREPOINT INC.

REGISTERED
No. 10606572
STATE OF INDIANA
PROFESSIONAL ENGINEER
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PREPARED FOR:
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CICERO, INDIANA 46034

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CHAPTER 400 STORM SEWER PIPES AND OPEN CULVERT MATERIALS

SECTION 401 GENERAL

401.01 Introduction

This section covers all work necessary for the construction of the storm sewer piping systems and related items complete, including catch basins and inlet drains, manholes, junction chambers, diversion chambers, outfall structures, and miscellaneous structures.

This specification covers the following types of materials for storm sewers, culverts, underdrains, inlet drains, conduits, and miscellaneous applications:

- 1. Reinforced Concrete Pipe and Fittings
2. Polyvinyl Chloride Pipe (PVC)
3. Corrugated Metal Pipe
4. Structural Plate Arches
5. Aluminum or Aluminized Steel Pipe and Structural Plate
6. Multi-Plate Pipe and Pipe Arches
7. PVC Composite Pipe
8. Corrugated Polyethylene Pipe- SSD (Perforated and Non-Perforated)

All lots shall have access to a subsurface or storm drain or open ditch.

Storm sewer systems shall have a minimum of four hundred (400) feet between structures.

This specification requires project plans and construction specifications to be submitted to and approved by all appropriate regulatory agencies prior to beginning any work.

Before construction and preferably before fabrication, the Contractor shall submit to the Town of Westfield Public Works Department for approval calculations on the thickness or strength class and drawings showing pipe lengths, joints, and other construction and installation details.

Pipe Marking

Each length of pipe shall bear the name or trademark of the manufacturer, the location of the plant, and the date of manufacture. Each length shall likewise be marked to designate the class or strength of the pipe. The marking shall be made on the exterior or interior of the pipe barrel near the bell or groove end and shall be plainly visible.

401.02 Minimum Size for Storm Sewers

The minimum diameter of all storm sewers shall be 12 inches. When the minimum 12-inch diameter pipe will not limit the rate of release to the required amount, the rate of release for detention storage shall be controlled by an orifice plate or other device, subject to acceptance of the Town of Westfield Public Works Department.

401.03 Materials

Manholes, Inlets, and Other Structures

Storm sewer manholes and inlets shall be constructed of precast reinforced concrete. Material and construction shall conform to the latest edition of the Indiana Department of Transportation (INDOT) "Standard Specifications", Sections 702 and 720.

Materials for manholes, junction chambers, diversion chambers, and miscellaneous concrete structures shall comply with the following:

- 1. Cement shall be Portland cement and shall meet the requirements of ASTM Specification C150, ACI 301, and ACI 318. Concrete for precast manhole sections shall be 3000 psi concrete. Monolithic manholes shall use 4000 psi concrete. Ready-mix concrete shall conform to ASTM C94, Alternate 2. Maximum size of aggregate shall be 3/4 inch. Slump shall be between 2 and 5 inches.
2. Forms for chamber and structures shall be plywood or other approved material. Steel forms shall be used for the inside face of monolithic concrete manholes.
3. Reinforcing steel shall conform to ASTM A615, Grade 60 deformed bars, or ASTM A616 Grade 60 deformed bars.
4. Mortar Materials:
a. Sand - ASTM Designation C144, passing a No. 8 sieve.
b. Cement - ASTM Designation C150, Type 1.
c. Water - shall be potable.

The manufacturer shall provide openings for sewers entering and leaving the manhole. Any additional openings needed to be made in the field shall be made by drilling holes at least 1/2 inch in diameter with a maximum spacing of 3 inches.

Manhole steps shall be made from a steel reinforcing rod encapsulated in a copolymer polypropylene resin. The manhole steps shall equal or exceed OSHA requirements.

Any other special manholes, junction chambers, diversion chambers, and miscellaneous concrete structures shall be constructed as detailed on the drawings.

Manhole bases shall be set on a minimum of six (6) inches of # 8 aggregate.

Concrete ends sections shall have a minimum of a twenty-four (24) inch toe plate, either poured in place or precast, bolted to the end section per Standard Detail (ST-30). Corrugated end sections with toe plates shall require Westfield Public Works approval.

Catch Basins

During construction, precautionary measures such as adequate screening of grates shall be maintained to deter earth and other materials from entering the drains.

Catch Basins, for sediment control, locations to be determined by a Professional Engineer, and approved by the Town of Westfield Public Works Department. Catch Basins shall be located within easily accessible dedicated easements or right of way of sufficient size to facilitate the required maintenance of these structures

Catch basins and curb inlet structures which are two (2) feet by two (2) feet in size shall not have a depth deeper than four (4) feet from the invert of the lowest pipe to the lowest part of the rim elevation of the casting. All structures which do not meet this criteria shall be a manhole type, which is forty-eight (48) inches in diameter.

Castings

Cast iron or ductile iron frames and gratings for catch basins and drain inlets shall be as shown on the drawings. Bearing surfaces shall be clean and shall provide uniform contact. Castings shall be tough, close-grained gray iron, sound, smooth, clean, free from blisters, blow holes, shrinkage, cold chuts, and all defects and shall conform to ASTM A48 Class No. 30-B.

During construction, precautionary measures such as adequate screening of grates shall be maintained to deter earth and other materials from entering the drains.

The following castings types are required:

- 1. Manholes - Neenah R 1772 A, or equivalent
2. Beehive Inlets - Neenah R 4342 or equivalent
3. Roll Curb Inlets - Neenah 3501 - TR or TL or equivalent
4. "Chair Back" Curb Inlet - Neenah 3287 - 10V or equivalent
5. Other types shall require approval of the Westfield Public Works Department.

Curb inlets castings which possess open backs or have grate bars parallel to traffic flow (are not bicycle safe) will not be accepted by the Westfield Public Works Department.

Storm sewer castings manhole covers, beehive inlets, curb inlets or other approved casting shall have the following phrases cast in recessed letters two (2) inches in height:

- 1. Storm Sewer
2. Drains to River or Drains To Waterway
3. Dump No Waste
4. Other phrases shall require approval of the Westfield Public Works Department.

All castings frames shall have a horizontal bearing surface around the entire perimeter of the frame in order to support the cover or grate.

Bench Walls

Bench walls shall be shaped and formed for a clean transition with proper hydraulics to allow the smooth conveyance of flows through the structure. The bench wall shall form a defined channel, to a minimum height of the spring line of the pipe.

Bench walls shall be formed using full depth Class "A" concrete. Solid concrete block, stone or sand shall not be permitted as a base or filler for the construction of the bench wall.

Reinforced Concrete Pipe and Fittings

Reinforced concrete pipe and fittings shall conform to ASTM C76, latest revision, for circular pipe and ASTM C507 for elliptical pipe.

Reinforced concrete pipe and fittings for normal conditions shall be reinforced in accordance with ASTM C76, Class III, IV or V, Wall B (minimum). Acceptance shall be on the basis of Subsection 4.1.1 of ASTM C76.

Circumferential reinforcing in circular pipe shall be required. Only with approval from the Westfield Public Works Department will elliptical reinforcing or combination of elliptical and circumferential reinforcing or part circular reinforcing shall be permitted, in circular pipe.

Concrete pipe shall be steam cured and shall not be shipped from point of manufacture for at least five days after having been cast.

Joints shall conform to the requirements of ASTM C443. Gaskets shall be of an oil resistant type having a minimum swell of 90% when tested in accordance with ASTM D471. Lubricant for jointing shall be approved by gasket manufacturer.

All rubber gaskets similar to and equal to "Press-Seal" or "Tylox" conforming to ASTM Designation C443, latest revision. The gasket shall be attached to the spigot of the pipe and shall be the sole element depended upon to make the joint flexible and practically watertight.

Butyl mastic joint sealant in rope or trowel applied form specifically made for permanently sealing joints in tongue and groove concrete sewer pipe. The material shall adhere tightly to the pipe surface and form a tight, flexible joint. The material shall have been in use for at least five years. Test results and material specifications shall be submitted to the Westfield Public Works Department and shall have been approved prior to use on the project.

Polyvinyl Chloride Pipe and Fittings

Polyvinyl chloride (PVC) pipe and fittings shall comply with ASTM D 3034.

Corrugated Metal Pipe and Pipe Arches

The following specifications shall govern the manufacture of the corrugated steel pipe and pipe arches.

- 1. Specifications for Zinc Coated (galvanized) Steel Sheets (ASTM A444).
2. Manufacture of Corrugated Steel Culverts and Underdrains (AASHTO M-36).
3. Structural Plate for Pipe, Pipe Arches, and Arches (AASHTO M-167.
4. Bituminous Coated Corrugated Steel Pipe and Arches (AASHTO M-190).
5. Sheet Material (ASTM A525).

Bituminous Coated Welded Seam Helically Corrugated Steel Pipe

The pipe shall be fabricated from flat coils. The base metal, spelter coating, and fabrication shall meet the applicable requirements of AASHTO M-36. Corrugations shall be 2-2/3-inch pitch by 1/2-inch depth. Each pipe shall have two annular corrugations rolled in each end. After the ends are rolled, the pipe shall be coated with bituminous material, inside and outside, to a minimum thickness of 0.05 inch as required by AASHTO M-190 for Type A coating.

Bituminous Coated and Paved Invert Welded Seam Helically Corrugated Steel Pipe

The pipe shall be fabricated from flat coils. The base metal, spelter coating, and fabrication shall meet the applicable requirements of AASHTO M-36. Corrugations shall be 2-2/3-inch pitch by 1/2-inch depth. Each pipe shall have two annular corrugations rolled in each end.

After the ends are rolled, the pipe shall be coated with bituminous material, inside and outside, to a minimum thickness of 0.05 inch. In addition, bituminous material shall be applied to form a smooth pavement in the bottom 25% of pipe and in the bottom 40% of pipe arch as required by AASHTO M-190 for Type C coating.

Smooth Lined Welded Seam Helically Corrugated Steel Pipe

The pipe shall be fabricated from flat coils. The base metal, spelter coating, and fabrication shall meet the applicable requirements of AASHTO M-36. Corrugations shall be 2-2/3-inch pitch by 1/2-inch depth. Each pipe shall have two annular corrugations rolled in each end. Each pipe shall have two lifting lugs welded to the outside of the pipe.

After the ends have been rolled, the pipe shall be coated with bituminous material, inside and outside, to a minimum thickness of 0.05 inch as required by AASHTO M-190 for Type A coating. The pipe shall be centrifugally lined on the inside with bituminous material to form a smooth surface which fills the corrugations to a minimum thickness of 1/8 inch above the crests of the corrugations. The bituminous lining material shall meet the requirements of AASHTO M-190.

Bituminous Coated Pipe Couplings

Coupling bands shall be the same base metal and spelter coating as the pipe. Bands shall be 0.064-inch thick and 10-1/2 inches wide. Bands shall be bituminous coated and shall have two corrugations 7-5/8 inches center to center. Bands 12-inch diameter through 30-inch diameter shall be one-piece, and 36-inch diameter through 96-inch diameter shall be two-piece. Band laps 12-inch diameter through 48-inch diameter shall be joined by one galvanized bar, bolt, and strap connector. Band laps 54-inch diameter through 96-inch diameter shall be joined by two galvanized bar, bolt, and strap connectors.

Aluminum Alloy Structural Plate

Aluminum alloy plates and fasteners intended for use in the construction of structural plate pipe and pipe arch for storm sewers shall meet the applicable requirements of AASHTO M-219. The plate shall be fabricated from aluminum alloy 5052 H141. The chemical composition of the plates shall conform to ASTM B209 alloy 5052.

The corrugations shall have a pitch of 9 inches plus or minus 3/8 inch and depth of 2-1/2 inches plus or minus 1/8 inch. The inside crown radius of the corrugations shall be not less than 2 inches.

The structural plate pipe or arches shall be assembled in accordance with the manufacturer's erection instructions and in accordance with the drawings.

Aluminized Steel Pipe and Arches

Aluminized coated corrugated steel pipe and pipe arch intended for use in the construction of storm sewers shall meet the applicable requirements of AASHTO M-36. Sheet material shall meet the latest revision of ASTM A525 and AASHTO M-274. The coils from which the pipe is produced shall be coated with 1.0 ounce per square foot of commercially pure aluminum.

Pipe shall be furnished circular or as a pipe-arch shape as required and shall be fabricated with helical corrugations and a continuous welded seam extending from end to end of each length of pipe.

Each end of each pipe with the welded seam shall have two annular corrugations reformed to permit joining with huffer bands.

Coupling bands shall be huffer bands.

Multi-plate Pipe and Pipe Arches

Multi-plate pipe and pipe arch structures shall be in accordance with AASHTO M-167. They shall be made with steel sections with corrugations 6 inches wide by 2 inches deep running at right angles to the section.

Bolts and nuts shall be special heat-treated galvanized 3/4-inch diameter bolts in accordance with ASTM specifications.

Multi-plate pipes and pipe arches shall be designed in accordance with the manufacturer's design criteria and in accordance with the drawings.

Detailed instructions regarding erection shall be furnished by the manufacturer.

PVC Composite Pipe and Fittings

ABS or PVC composite pipe and fittings shall conform to ASTM D 2680, Latest Revision.

Corrugated Polyethylene Pipe and Fittings

Corrugated polyethylene pipe shall comply with the requirements for materials, test methods, dimensions, and marking in accordance with AASHTO M-252 for pipe diameters 6" - 10", AASHTO M-294 for pipe diameters of 12" - 48", and AASHTO MP7 for 54" and 60".

The resin material shall meet ASTM D3350 cell classification 3354A00C.

The pipe lengths shall be connected using a gasketed, bell and spigot joint. This joint shall consist of a factory installed, gasketed double bell polyethylene coupling, a factory welded bell or integral bell. The spigot end of the pipe shall be furnished with a factory installed elastomeric profile "O-ring" rubber gasket that meets ASTM F-477.

The pipe shall be shipped with a removable trap to protect the gasket. Provide lubrication to the joint prior to pushing together. At least two (2) corrugations of the spigot end must insert into the bell end.

All HDPE pipe shall be certified through the Plastic Pipe Institute (PPI) Third Party Certification Program. All HDPE pipe delivered and installed shall bear the Third Party Administered PPI Seal.

Subsurface Drain Tiles

Double wall smooth bore corrugated polyethylene tile, manufactured under specification ASTM F 667, shall be required for all subsurface drain tile installed in swales. Single wall corrugated polyethylene drain tile shall be required for curb sub-grade drainage.

Polyethylene tile shall possess male and female pipe ends, which allow the construction of overlapping, gasket pipe joints, in conformance with the requirements of ASTM D 3212. The gasket material shall conform to all requirements of ASTM F 477. As an alternative, pipe joints utilizing external couplings bands will be accepted, provided the minimum AASHTO requirements for satisfying soil tightness are also achieved.

Storm sewer pipe shall be of the size shown on the drawings and shall meet all requirements of these specifications. Subsurface drains (SSD) shall have a minimum of four hundred (400) feet between structures. Subsurface drains shall have clean-outs installed every 400 feet or at changes in direction.

CHAPTER 500 INSTALLATION OF STORMWATER FACILITIES

SECTION 501 GENERAL

501.01 Pipe Cover, Grade, and Separation from Sanitary Sewers

Pipe grade shall be such that, in general, a minimum of 2.0 feet of cover is maintained over the top of the pipe, if the pipe is to be placed under pavement, then the minimum pipe cover shall be 2.5 feet from top of pavement to top of pipe. Uniform slopes shall be maintained between inlets, manholes and inlets to manholes. Final grade shall be set with full consideration of the capacity required, sedimentation problems, and other design parameters. Minimum and maximum allowable slopes shall be those capable of producing velocities of between 2.5 and 10 feet per second, respectively, when the sewer is flowing full. Maximum permissible velocities for various storm sewer materials are listed in Table 501-1. A minimum of 2.0 feet of vertical separation between storm sewers and sanitary sewers shall be required. When this is not possible, the sanitary sewer must be encased in concrete or ductile iron within 5 feet, each side, of the crossing centerline.

Rear Yard Swales

Rear yard swales shall have a minimum slope of 2% gradient. Swales less than a 2% gradient are required to have double-wall perforated drain tile installed two (2) feet below the invert of the swale. Minimum swale slope shall be greater than 1% gradient. Subsurface drains shall have a minimum slope of .5% gradient.

Proposed road grades will be required to be graded within two (2) inches of the proposed subgrade prior to installation of SSD. Trench width for SSD shall be a minimum of three (3) inches on both sides of the SSD, with a minimum trench width of twelve (12) inches.

501.02 Alignment

Storm sewers shall be straight between manholes and/or inlets.

All Manholes and inlets must be pre-stamped with an appropriate message per the Town of Westfield Public Works Department Standards. Manholes and/or inlets shall be installed to provide human access to continuous underground storm sewers for the purpose of inspection and maintenance. The casting access minimum inside diameter shall be no less than 22 inches or a rectangular opening of no less than 22 inches by 22 inches. Manholes shall be provided at the following locations:

- 1. Where two or more storm sewers converge.
2. Where pipe size or the pipe material changes.
3. Where a change in horizontal alignment occurs.
4. Where a change in pipe slope occurs.

At intervals in straight sections of sewer, not to exceed the maximum allowed. The maximum distance between storm sewer manholes shall be as shown in Table 501-2.

In addition to the above requirements, a minimum drop of 0.1 foot through manholes and inlet structures should be provided. Pipe slope should not be so steep that inlets surcharge (ie. hydraulic grade line should remain below rim elevation).

Manhole/inlet inside sizing shall be according to the Town of Westfield Public Works Department Standards. Note that the Town of Westfield Public Works Department may require the applicant to provide pre-treatment BMPs prior to discharge of the storm sewer line into a pond.

501.04 Installation and Workmanship

Bedding and backfill materials around storm sewer pipes, sub-drains, and the associated structures shall be according to the Town of Westfield Public Works Department Standards. The specifications for the construction of storm sewers and sub-drains, including backfill requirements, shall not be less stringent than those set forth in the latest edition of the "INDOT Standard Specifications". Additionally, ductile iron pipe shall be laid in accordance with American Water Works Association (AWWA) C-600 and clay pipe shall be laid in accordance with either American Society of Testing Materials (ASTM) C-12 or the appropriate American Association of State Highway and Transportation Officials (AASHTO) specifications. Dips/sags on newly installed storm systems will not be allowed. Also, infiltration from cracks, missing pieces, and joints shall not be allowed. Variations from these standards must be justified and receive written acceptance from the Town of Westfield Public Works Department. All structures shall require inspection prior to backfill.

501.05 Special Hydraulic Structures

Special hydraulic structures required to control the flow of water in storm runoff drainage systems include junction chambers, drop manholes, stilling basins, and other special structures. The use of these structures shall be limited to those locations justified by prudent planning and by careful and thorough hydraulic engineering analysis. Certification of special structures by a certified Structural Engineer may also be required.

The use of stormwater lift stations will not be permitted under any circumstances.

501.06 Connections to Storm Sewer System

Unless otherwise approved, perforated subsurface drain tiles, footer drains, or sump pumps lines shall connect to a storm structure. Storm sewer connections shall be provided by either precast or drilled holes, which are to be a minimum of two (2) inches larger the O.D. of the connecting tile. Drain tile connections shall be made with either Tee or Wye method.

Blind connections to storm sewer pipes shall not be allowed.

Subsurface tile as specified herein may be used to convey water collected in sump pits and footer drains to an acceptable storm sewer outlet, provided these drain tiles are properly sized to accept these flows. This is not to be construed as a requirement to install gutter or building drains shall not be allowed to outlet directly into storm sewer systems.

To allow any connections to the storm sewer system, provisions for the connections shall be shown in the drainage calculations for the system. Specific language shall be provided in the protective covenants, on the record plat, and with the parcel deed of record, noting the ability or inability of the system to accommodate any permitted connections, for example, sump pumps and footing drains.

- 1. Sump pumps installed to receive and discharge groundwater or other stormwater shall be connected only into T subsurface drain (SSD) lateral connection if provided. When connection to the SSD is not possible, discharge pipe must daylight. Sump pumps installed to receive and discharge roof drain flow or other sanitary sewage shall be connected to the sanitary sewers. A sump pump shall be used for one function only, either the discharge of stormwater or the discharge of sanitary sewage, each being connected to the respective receiving system only.
2. Footing drains and perimeter drains shall be connected only into T subsurface drain (SSD) lateral connection if provided. When connection to the SSD is not possible, discharge pipe must daylight.
3. All roof downspouts, roof drains, or roof drainage piping shall discharge onto the ground and shall not be directly connected to the storm drainage system. Variation from this requirement may be requested and granted by the Town of Westfield Public Works Department in special circumstances. No downspouts or roof drains shall be connected to the sanitary sewers.
4. Garage and Basement floor drains and water softener discharge shall not be connected to the storm sewers.
5. Swimming Pool drains shall not be connected to the storm sewers unless the water is dechlorinated prior to being connected to the storm sewer.

501.07 Inspection and Rejection of Pipe

The quality of all materials, the process of manufacture, and the finished pipe shall be subject to inspection and approval by the Westfield Public Works Department or designee. Such inspection may be made at the place of manufacture or on the work after delivery, or at both places; and the pipe shall be subject to rejection at any time on account of failure to meet any of the specifications' requirements even though sample pipes may have been accepted as satisfactory at the place of manufacture.

Prior to being lowered into the trench, each pipe shall be carefully inspected and those not meeting the specifications shall be rejected and at once removed from the work.

The Westfield Public Works Department shall have the right to cut cores from such pieces of the concrete pipe as he desires for such inspection and tests as he may wish to apply. The Developer/Contractor shall pay for the samples of an Independent Laboratory Testing.

Holes left by the removal of cores shall be filled in an approved manner by and at the expense of the manufacturer of the pipe.

The Westfield Public Works Department shall also have the right to take samples of concrete after it has been mixed, or as it is being placed in the forms or molds and to make such inspection and tests thereof as he may desire.

Any pipe which has been damaged after delivery will be rejected and replaced solely at the Contractor's expense.

501.08 Handling Pipe

Each pipe section shall be handled into its position in the trench only in such manner and by such means as the Westfield Public Works Department or designee approves as satisfactory. As far as practicable, the Contractor will be required to furnish slings, straps, and other approved devices to permit satisfactory support of all parts of the pipe when it is lifted.

501.09 Notice to Westfield Public Works Department

The Westfield Public Works Department or designee shall be notified when the pipes are to be laid in the trench. At least 15 feet of the pipe shall, under ordinary circumstances, be laid before covering begins.

501.10 Laying Pipe

All pipes shall be reinspected for soundness and damage due to handling immediately before being lowered into the trench. Any pipe found to be unsound or damaged will be rejected and shall be removed immediately from the site of the work.

No portion of a Storm Sewer pipe, open culvert, manhole, inlet, or subsurface tile system shall be installed directly or indirectly onto frozen ground or with frozen backfill materials.

Where ground water is encountered, the contractor shall make every effort necessary to secure a dry trench bottom prior to installation of the storm water system. The contractor shall be required to maintain the groundwater level below the base of the excavation. The Town, or the Westfield Public Works Department, will not assume any liability for the actions of the Developer or Contractor in the performance of the required dewatering operation. If trench conditions outlined in this section cannot be achieved, the Westfield Public Works Department or designee may terminate installation until such efforts can be achieved.

All pipes shall be laid accurately to the required line and grade as shown on the drawings, and in the manner prescribed by the pipe manufacturer and appropriate ASTM Specifications, to form a close, concentric joint with the adjoining pipe and to bring the invert of each section to the required grade. The supporting of pipe on block will not be permitted.

Pipe laying shall precede upgrade, beginning at the lower end of the sewer.

Practically watertight work is required, and the Contractor shall construct the sewers with the type of joint specified.

Joints between precast structures shall be sealed with (1) An approved rubber gasket manufactured and installed in accordance with ASTM C 443, latest version, (2) A 1/2 inch diameter non-asphaltic mastic (Kent Seal or approved equal) conforming to AADHTO M-198 and Federal Specifications SS 521-A, or 4 (3) mortar or butyl rubber sealed on the outside and (4) mortar sealed on the inside and brushed smooth.

The annular space between the pipe and precast structure walls shall be filled inside and outside with a groud mixture composed of 2 parts of fine aggregate and one part of Portland Cement or Class "A" Concrete.

All pipes shall be laid to the line and grade as shown on the drawings. Variations from a uniform line and grade as shown on the drawings shall be cause for the line to be rejected.

All pipes shall be bedded as described in this specification under Pipe Bedding. Bell holes shall be excavated in advance of pipe laying so the entire pipe barrel will be uniformly on the prepared subgrade.

Each length of pipe shall be mechanically pulled "home" with a winch or come-along against the section previously laid and held in place until the trench and bedding are prepared for the next pipe section. Care shall be taken in laying the pipe so not to damage the bell or the spigot end of the pipe. Mechanical means consisting of a cable placed inside of a cable placed inside of the pipe with a winch, jack, or come-along shall be considered to pull the pipe home where pushing the pipe will not result in a joint going completely home and staying in place.

The Contractor shall use laser beam equipment, surveying instruments, or other proven techniques to maintain accurate alignment and open excavation shall be satisfactorily protected at all times. At the end of each day's work, the open ends of all pipes shall be protected against the entrance of animals, children, earth, or debris by bulkheads or stoppers. The bulkheads or stoppers shall be

perforated to allow passage of water into the installed pipe line to prevent flotation of the pipe line. Any earth or other material that may find entrance into the main sewer or into any lateral sewer through any such open end of unplugged branch must be removed at the Contractor's expense. The cost of all such plugs, and the labor connected therewith, must be included in the regular bid for the sewers.

Storm sewer which outlets into a Hamilton County Regulated Drain shall be approved, inspected, and constructed per the latest standards of the Hamilton County Surveyor's Office Standards.

501.11 Pipe Bedding and Haunching

Each pipe section shall be laid in a firm foundation of bedding material and haunched and backfilled with care.

Prior to pipe installation, carefully bring bedding material to grade along the entire length of pipe to be installed. To provide adequate support for the pipe, the following bedding procedures are recommended.

When Angular 60 to 12 mm (1/4 to 1/2-inch) clean graded stone, slag, or crushed stone material is used for bedding, little or no compaction is necessary due to the nature of the angular particles. A depth of 4 to 6 inches is generally sufficient to provide uniform bedding. If Class I material is used for bedding, it must also be utilized for haunching up to or higher than the spring line of the pipe to avoid loss of side support through migration of Class II haunching material into the bedding.

- 1. Take care with coarse sands and gravels and maximum size 20 mm (3/4-inch) materials, to provide uniformly compacted bedding. Excavate the bedding material or place it to a point above the pipe bottom, determining such point by the depth of loose material resulting in the preparation of the bedding and the amount of compaction that will be required to bring the material to grade. Use hand or mechanical tamping to compact the bedding material to a minimum 85% Standard Proctor Density.
2. Slightly damp material will generally result in maximum compaction with a minimum of effort. If water is added to improve compaction or if water exists in the trench, take care to avoid saturation of Class II material, which could result in additional stability problems. Check grade of bedding after compaction.

Bedding material shall have a minimum thickness beneath the pipe of 4 inches (100 mm) or oneighth of the outside diameter of the pipe, whichever is greater, and shall extend up the sides of the pipe one-sixth of the outside diameter of the pipe.

The rigid pipe, such as concrete or ductile iron, backfill between the bedding material and a plane 12 inches (300 mm) over the top of the pipe shall be hand-placed finely divided sand, free from debris and stones, or granular backfill if required.

For flexible pipe, corrugated metal pipe, the placement of embedment material or haunching around the pipe must be done with care. The ability of the pipe to withstand loading in a trench depends a large part on the method employed in its installation. If crushed stone, pea gravel, or graded gravel or sand is used to backfill between the bedding material and a plane 12 inches (300 mm) over the top of the pipe, it shall be hand placed. If fine sand, silt, or clayey gravels are used for initial backfilling over the pipe, the material shall be hand placed in 6- to 8-inch layers and hand compacted on both sides of the pipe to an elevation 12 inches (300 mm) over the top of the pipe. Care should be taken so not to compact directly over the pipe.

In yielding subsolls, the trench bottom shall be undercut to the depth necessary and backfilled with graded, crushed stone to form a firm foundation.

Where excavation occurs in rock or hard shale, the trench bottom shall be undercut and a minimum of 6 inches (150 mm) crushed stone bedding placed prior to pipe installation.

501.12 Concrete Cradle (Class "A" Bedding)

Concrete cradles shall be constructed of Class "B" concrete and of the design shown on the detailed drawings.

PLANT SCHEDULE					
Symbol	Botanical Name	Common Name	Size	Container	Notes
SHADE TREES					
Ace-a	<i>Acer rubrum</i> 'Armstrong'	Armstrong Red Maple	2" cal.	B&B	strong central leader, matched
Ace-s	<i>Acer saccharum</i> 'Legacy'	Legacy Sugar Maple	2" cal.	B&B	full, matched
Bet-n	<i>Betula nigra</i>	River Birch	6' ht.	B&B	clump form, 3 divisions
Car-c	<i>Carpinus caroliniana</i>	American Hornbeam	2" cal.	B&B	
Cl-a-l	<i>Cladostaurus lutea</i>	Yellowwood	6' ht.	B&B	full, matched
Gle-t	<i>Gleditsia triacanthos</i> inermis 'shademaster'	Shademaster Honeylocust	2" cal.	B&B	full
Lir-t	<i>Liriodendron tulipifera</i>	Tulip Tree	2" cal.	B&B	strong central leader
Pla-x	<i>Platanus x acerifolia</i>	London Plane Tree	2" cal.	B&B	symmetrical, full
Que-r	<i>Quercus rubra</i>	Red Oak	2" cal.	B&B	dug in spring, symmetrical
Ulm-x	<i>Ulmus</i> 'Princeton'	Princeton Elm	2" cal.	B&B	symmetrical, matched
ORNAMENTAL TREES					
Ame-x	<i>Amelanchier x grandiflora</i> 'Autumn Brilliance'	Autumn Brilliance Serviceberry	6' ht.	B&B	multi-stemmed, 3-5 stems
Cer-c	<i>Cercis canadensis</i>	Redbud	6' ht.	B&B	multi-stemmed
Cra-c	<i>Crataegus crus galli</i> var. inermis	Thomless Cockspur Hawthorn	6' ht.	B&B	symmetrical, matched
EVERGREEN TREES					
Abi-c	<i>Abies concolor</i>	White Fir	6' ht.	B&B	symmetrical, full
Pic-a	<i>Picea abies</i>	Norway Spruce	6' ht.	B&B	symmetrical, full
Pic-g	<i>Picea glauca</i> 'Densata'	Black Hills Spruce	6' ht.	B&B	symmetrical, full
Pic-p	<i>Picea pungens</i> 'Glauc'	Colorado Blue Spruce	6' ht.	B&B	symmetrical, full
DECIDUOUS SHRUBS					
Cle-a	<i>Clethra alnifolia</i> 'Hummingbird'	Hummingbird Summersweet	24"	container	space @ 3'-0" o.c.
Ile-v	<i>Itea virginica</i> 'Henry's Gamet'	Henry's Gamet Sweetspire	24"	container	space @ 3'-0" o.c.
EVERGREEN SHRUBS					
Ile-b	<i>Ilex x meserveae</i> 'Blue Princess'	Blue Princess Holly	24"	container	space @ 6'-0" o.c. provide one male species per grouping
Ile-x	<i>Ilex x Willemer'</i>	Emerald Magic Holly	24"	container	space @ 3'-0" o.c.
Ile-m	<i>Ilex x meserveae</i> 'Mesog'	China Girl Holly	24" ht.	container	space @ 6'-0" o.c. provide one male species per grouping
Jun-x	<i>Juniperus virginiana</i> 'Grey Owl'	Grey Owl Juniper	18"	container	space @ 4'-0" o.c. allow to mass
Leu-f	<i>Leucothoe fontanesiana</i> 'Rainbow'	Rainbow Variegated Leucothoe	18"	container	space @ 4'-0" o.c., allow to mass
Myr-p	<i>Myrica pensylvanica</i>	Bayberry	24"	container	space @ 5'-0" o.c. allow to colonize
Tax-m	<i>Taxus x median</i> 'Brownii'	Brown's Spreading Yew	24"	container	space @ 5'-0" o.c. allow to mass
Tax-x	<i>Taxus x media</i> 'Ward'	Ward Yew	24" ht.	container	space @ 3'-6" o.c. allow to mass

-  Area to receive seeded lawn
-  Area to receive native plugs
-  Area to receive low mow seeded lawn

GENERAL LANDSCAPE & PLANTING NOTES

- Refer to Project Manual for Planting Specifications and Topsoil requirements. Refer to Plant Schedule and Planting Details for additional information.
- All materials are subject to the approval of the Landscape Architect and Owner at any time. Landscape Architect to inspect all plant locations and plant bed conditions prior to installation. On-site adjustments may be required.
- Rootballs shall meet or exceed size standards as set forth in 'American Standards for Nursery Stock'. MAIN LEADERS OF ALL TREES SHALL REMAIN INTACT.
- Remove from the site any plant material that turns brown or defoliates within five (5) days after planting. Replace immediately with approved, specified material.
- Plant counts indicated on drawings are for Landscape Architect's use only. Contractor shall make own plant quantity takeoffs using drawings, specifications, and plant schedule requirements (i.e., spacing), unless otherwise directed by Landscape Architect. Contractor to verify bed measurements and install appropriate quantities as governed by plant spacing per schedule. Plant material quantities shown on plan are minimum quantities. Additional material may be needed to meet spacing requirements and field conditions.
- Seed all areas disturbed by construction activities that are not otherwise noted to receive pavement, planting bed, or sod treatment.
- The Contractor shall install and/or amend topsoil in all proposed bed areas to meet Specifications. Contractor shall coordinate quantity and placement of topsoil. Landscaper shall verify depth of topsoil prior to plant installation. (Refer to specifications for topsoil source and placement requirements)
- All tree locations shall be marked with 2x2" stakes prior to planting for review and approval by the Landscape Architect. Any plant material installed in an incorrect location, by the judgment of the Landscape Architect, shall be reinstalled at the Contractor's expense.
- All plant beds shall receive 3" minimum of shredded hardwood bark mulch (unless otherwise noted).
- Verify all utility locations in the field prior to beginning work. Repair all damaged utilities to Owner's satisfaction at no additional cost.
- The Contractor shall maintain all plant material and lawns until the project is fully accepted by the Landscape Architect, unless otherwise noted.
- All workmanship and materials shall be guaranteed by the Contractor for a period of one calendar year after Final Acceptance.
- Install all plant material in accordance with all local codes and ordinances. Coordinate with the Owner to obtain any required permits necessary to complete work.
- Contractor shall test all tree pits for drainage. Any tree pit that holds water for more than 24 hours shall be installed using tree pit drainage.
- Tree Protection Fencing is the responsibility of the Contractor. Minimum protected area shall include the full drip line of the canopy. NO construction activities, material storage, etc. may occur within that area. The Contractor shall ensure that no soil compaction or tree damage occurs in any Protected areas, at any time during the construction process. Trees shall be matched in groups unless otherwise noted.

DETENTION POND PLUG INSTALLATION NOTES

- Do not depend on locations of plug installations shown in drawings. Establish the correct zones of specified plantings based on actual hydrology of the site and detention ponds.
- Pond shall be filled to normal pool level prior to the installation of plugs.
- Plants to be installed between April 1 and July 31st. Do NOT install plugs after September 1st.
- Prior to installation of plugs, install 5' tall orange plastic fence with max. 1" square openings along both sides of planting zones to keep geese and other water fowl from eating plugs. Posts to be a maximum of 15' spacing. Fence material to extend under the water. Install baling twine between fences across the top of plantings in an "x" pattern @ 1' o.c. Fence and baling twine to be removed after one growing season or once plug roots are established.
- Do not install plugs until lawn has been established.
- Ensure plugs receive 1" of water per week during the first 60 days or during the course of the maintenance period.
- Remove all invasive species during the first growing season.
- Provide 2" mulch around newly installed plugs where standing water is not present.

PLUG SPECIES

Install plugs 12" o.c. triangular spacing

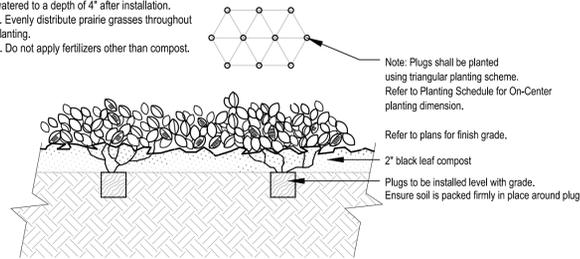
SEDGES

- Carex annectans* var. *xanthocarpa*
- Carex emoryi*
- Carex frankii*
- Carex grayii*
- Carex vulpinoidea*
- Yellow Fox Sedge
- Riverbank Tussock Sedge
- Frank's Sedge
- Burr Sedge
- Fox Sedge

WILDFLOWERS

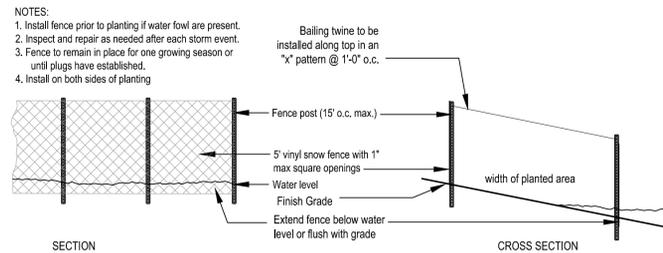
- Asclepias incarnata*
- Aster firmus*
- Aster novae-angliae*
- Eupatorium perfoliatum*
- Gentiana andrewsii*
- Iris virginica shrevei*
- Lobelia cardinalis*
- Lobelia siphilitica*
- Mimulus ringens*
- Penstemon calycosus*
- Penstemon digitalis*
- Pycnanthemum virginianum*
- Rudbeckia subtomentosa*
- Zizia aurea*
- Marsh Milkweed
- Shining Aster
- New England Aster
- Boneset
- Bottle Gentian
- Blue Flag
- Cardinal Flower
- Great Blue Lobelia
- Monkeyflower
- Smooth Penstemon
- Foxglove Beardtongue
- Mountain Mint
- Sweet Black-eyed Susan
- Golden Alexanders

- NOTES:**
- Ensure area to be plugged has been sprayed at least two weeks prior to installation.
 - Following installation, area to be thoroughly watered to a depth of 4" after installation.
 - Evenly distribute prairie grasses throughout planting.
 - Do not apply fertilizers other than compost.



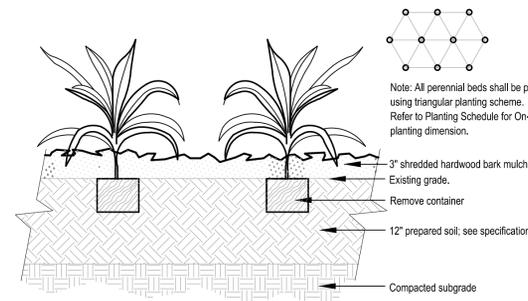
PLUG INSTALLATION

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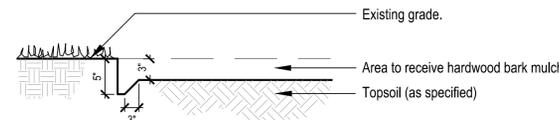
GOOSE FENCE @ DETENTION POND

Not to Scale



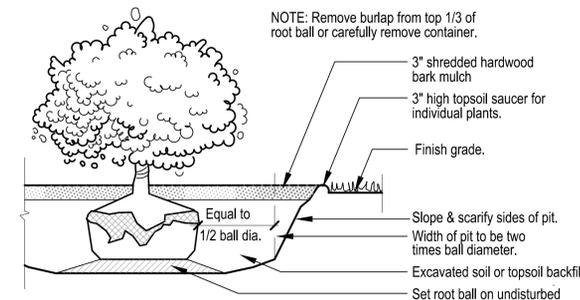
PERENNIAL PLANTING

Not to Scale



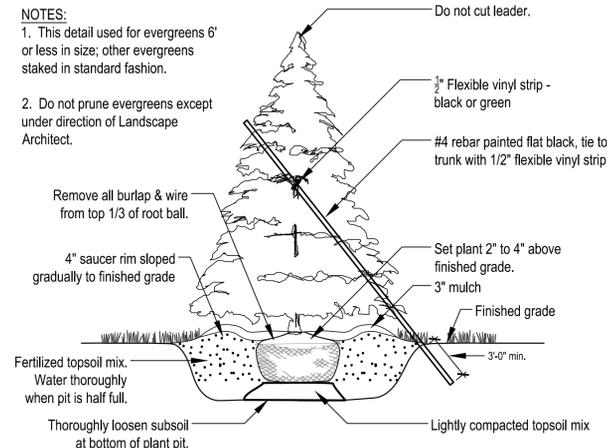
SPADE EDGE

Not to Scale



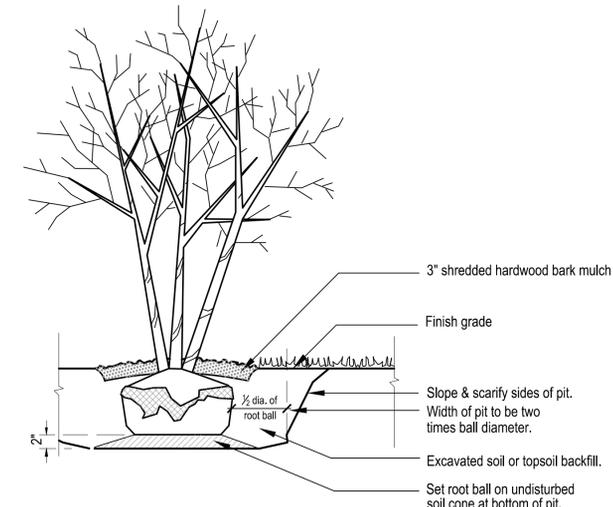
SHRUB PLANTING

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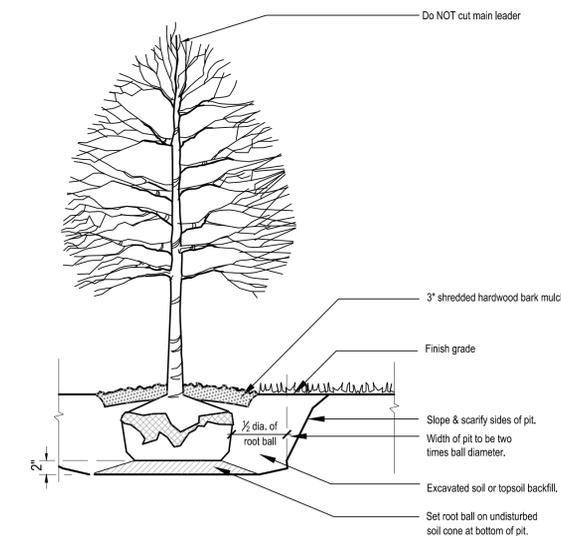
EVERGREEN TREE PLANTING

Not to Scale



MULTI-STEM TREE PLANTING

Not to Scale



TREE PLANTING

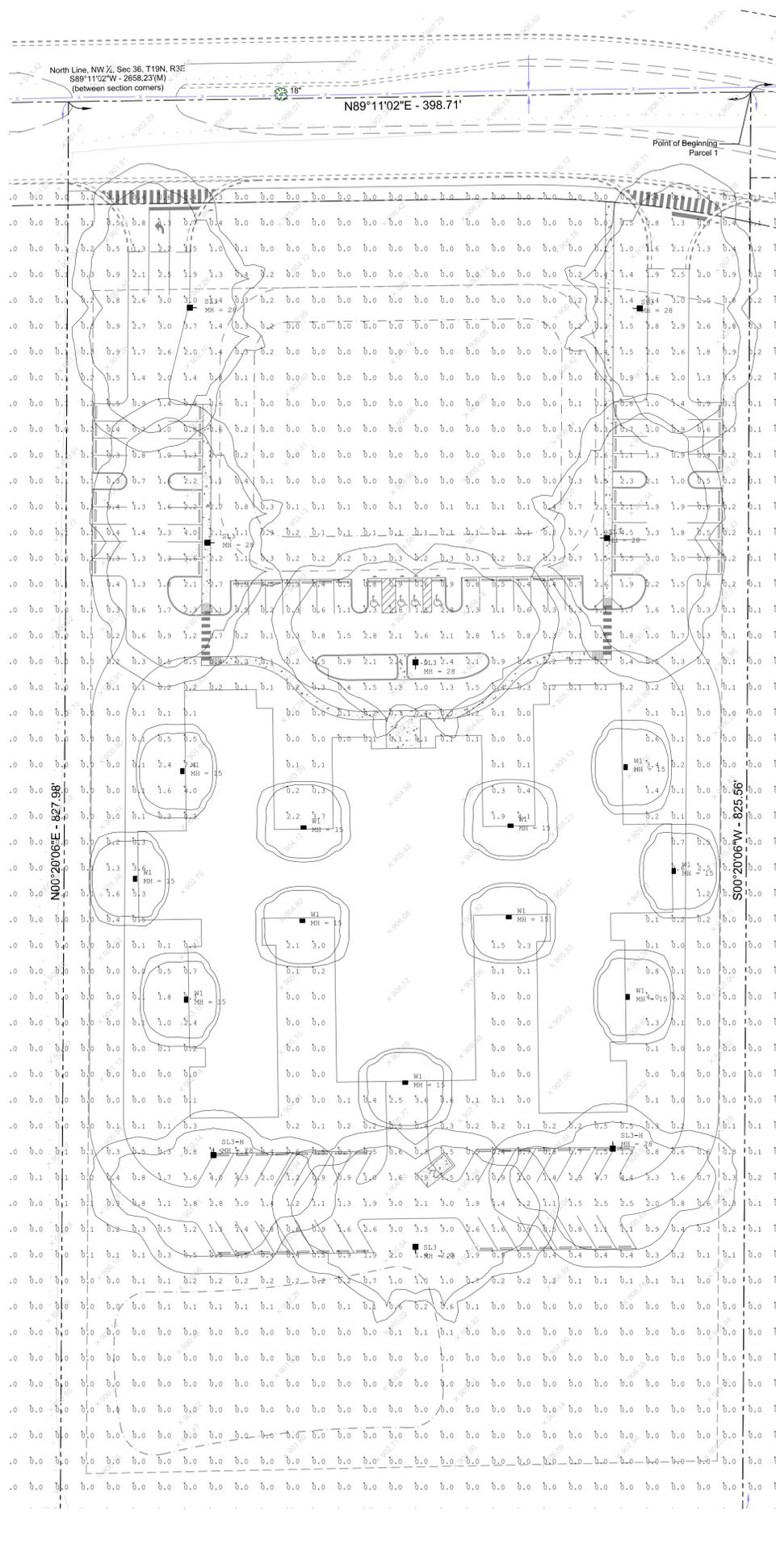
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CERTIFIED BY

DATE:	02/03/12
DRAWN BY:	APP
CHK'D BY:	APP
JOB NO.:	201100738

REVISIONS	



SITE LIGHTING NOTES:
SCALE: 1"=40'

1. FOOT CANDLE LEVELS ARE MAINTAINED WITH A .72 LIGHT LOSS FACTOR FOR POLE MOUNTED LIGHTS AND A .81 LIGHT LOSS FACTOR FOR WALL MOUNTED LIGHTS.
2. LIGHT POLES ARE 26' TALL MOUNTED ON BASES FOR A TOTAL FIXTURE MOUNTING HEIGHT OF 28'.
3. FOOT CANDLE LEVELS ARE CALCULATED 3' ABOVE GRADE.

Calculation Summary

Label	Qty	Label	Arrangement	LLF	Description	Lum. Watts	Arr. Watts	Total Watts	Lumens/Lamp
SL3	6	SL3	SINGLE	0.720	GFM-3-400-PSMV-F 5SOBO S11G 24 S 5BC	452	452	2712	44000
W1	11	W1	SINGLE	0.720	SIFCM-WB-150-MH-F	185	185	2035	14000
SL3-H	2	SL3-H	SINGLE	0.720	GFM-3-400-PSMV-F-HSS 5SOBO S11G 24 S 5BC WITH GLARE SHIELD	452	452	904	44000

TYPE SL3 GREENBRIAR® - FLAT LENS

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **GFR 5 1000 PSMV F MT PLP 8BK 20**

Label	Qty	Label	Arrangement	LLF	Description	Lum. Watts	Arr. Watts	Total Watts	Lumens/Lamp
SL3	6	SL3	SINGLE	0.720	GFM-3-400-PSMV-F 5SOBO S11G 24 S 5BC	452	452	2712	44000
W1	11	W1	SINGLE	0.720	SIFCM-WB-150-MH-F	185	185	2035	14000
SL3-H	2	SL3-H	SINGLE	0.720	GFM-3-400-PSMV-F-HSS 5SOBO S11G 24 S 5BC WITH GLARE SHIELD	452	452	904	44000

GREENBRIAR® - FLAT LENS (Various refractors are protected by U.S. Patent No. 6,464,378)

HOUSING - The aluminum housing is available in two sizes. Both housings are the same dimensions except however the 8" is deeper. Both are finished to produce a clean, sharp appearance, and designed to ensure weather-tight construction. Top access covers provide ease of installation and servicing.

LENS/BARNET - The flat clear lens and glass lens is sealed to the housing with an EPDM gasket, preventing entry of moisture. The lens is made of clear, high-strength polycarbonate or high pressure sodium. Clear lens is supplied as standard.

TOP COVER FASTENERS - The four captive stainless steel fasteners secure the top access cover to the housing. Support arms consist of four 1/16" O.D. aluminum rods and are provided for ease of installation.

SOCKETS - Poles are supplied with sockets for pole-mounted luminaires.

FINISHES - Each fixture is finished with LEI's Duragrip® polymer powder coat finishing process. The Duragrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five years. Standard colors include bronze, black, platinum, silver, white, and various greens, metallic blue, and options.

DECAL STRIPING - LEI offers optional color-coordinated decals in a standard color to accent the fixture. Decals are guaranteed for five years against peeling, cracking, or fading.

PHOTOMETRICS - Please refer our website at www.lei.com for detailed photometric data.

REFLECTOR DISTRIBUTION PATTERN - The series is available in a variety of reflector systems and distribution patterns, all with vertical oriented beam: BFR: Type II (2), Type IV (2), Reflector Forward Throw (P), Type V (5), Automatic Forward Throw (A), as well as ART (Advanced Reflector Technology) optical systems: Automotive Forward Throw (AFT), Reflector Forward Throw (RFT), and a high performance Type V (5) for 35'-42' mounting heights. BFR: Type II (2), Type IV (2), Reflector Forward Throw (P), and Type V (5). All reflectors are field-replaceable.

SHIPPING WEIGHTS - Greenbriar Flat Lens

Order Number	Net Weight (Lbs.)	Length (Inch)	Width (Inch)	Height (Inch)
GFR5	10.4	49.0	49.0	4.0
GFR6	14.8	49.0	49.0	6.0
GFR8	20.2	49.0	49.0	8.0
GFR10	26.6	49.0	49.0	10.0

TYPE SL3 SIERRA FULL CUTOFF WALL PACK

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **SIFCM WB 100 MH F MT BRZ**

Label	Qty	Label	Arrangement	LLF	Description	Lum. Watts	Arr. Watts	Total Watts	Lumens/Lamp
SL3	6	SL3	SINGLE	0.720	GFM-3-400-PSMV-F 5SOBO S11G 24 S 5BC	452	452	2712	44000
W1	11	W1	SINGLE	0.720	SIFCM-WB-150-MH-F	185	185	2035	14000
SL3-H	2	SL3-H	SINGLE	0.720	GFM-3-400-PSMV-F-HSS 5SOBO S11G 24 S 5BC WITH GLARE SHIELD	452	452	904	44000

SIERRA FULL CUTOFF WALL PACK

HOUSING - The one-piece die-cast aluminum housing is available in medium and large sizes. The attractive one-piece housing provides a clean appearance, increasing structural strength, and ensures weather-tight operation.

WALL MOUNT - For installation convenience, each fixture is shipped complete with ready-to-install hardware and plugs, providing 1/2" knockout outlets for surface conduit. Not recommended for ceiling mounting.

DOOR FRAMES - Door fasteners have two captive stainless steel screws to ensure proper closure.

LENS/BARNET - A flat clear tempered glass lens is sealed to the lens frame with silicone putty. The die-cast aluminum lens frame is designed for easy front servicing. The lens frame has a one-piece silicone continuous gasket for maximum sealing to the housing.

SOCKETS - Poles are supplied with sockets for pole-mounted luminaires.

FINISHES - Standard finish colors are bronze, black, and white.

PHOTOMETRICS - Please refer our website at www.lei.com for detailed photometric data.

SHIPPING WEIGHTS - Sierra

Order Number	Net Weight (Lbs.)	Length (Inch)	Width (Inch)	Height (Inch)
SIFCM	6.18	49.0	49.0	4.0
SIFCM-L	11.84	49.0	49.0	4.0
SIFCM-M	14.8	49.0	49.0	6.0

TYPE W1 SIERRA FULL CUTOFF WALL PACK

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **SIFCM WB 100 MH F MT BRZ**

Label	Qty	Label	Arrangement	LLF	Description	Lum. Watts	Arr. Watts	Total Watts	Lumens/Lamp
SL3	6	SL3	SINGLE	0.720	GFM-3-400-PSMV-F 5SOBO S11G 24 S 5BC	452	452	2712	44000
W1	11	W1	SINGLE	0.720	SIFCM-WB-150-MH-F	185	185	2035	14000
SL3-H	2	SL3-H	SINGLE	0.720	GFM-3-400-PSMV-F-HSS 5SOBO S11G 24 S 5BC WITH GLARE SHIELD	452	452	904	44000

SIERRA FULL CUTOFF WALL PACK

HOUSING - The one-piece die-cast aluminum housing is available in medium and large sizes. The attractive one-piece housing provides a clean appearance, increasing structural strength, and ensures weather-tight operation.

WALL MOUNT - For installation convenience, each fixture is shipped complete with ready-to-install hardware and plugs, providing 1/2" knockout outlets for surface conduit. Not recommended for ceiling mounting.

DOOR FRAMES - Door fasteners have two captive stainless steel screws to ensure proper closure.

LENS/BARNET - A flat clear tempered glass lens is sealed to the lens frame with silicone putty. The die-cast aluminum lens frame is designed for easy front servicing. The lens frame has a one-piece silicone continuous gasket for maximum sealing to the housing.

SOCKETS - Poles are supplied with sockets for pole-mounted luminaires.

FINISHES - Standard finish colors are bronze, black, and white.

PHOTOMETRICS - Please refer our website at www.lei.com for detailed photometric data.

SHIPPING WEIGHTS - Sierra

Order Number	Net Weight (Lbs.)	Length (Inch)	Width (Inch)	Height (Inch)
SIFCM	6.18	49.0	49.0	4.0
SIFCM-L	11.84	49.0	49.0	4.0
SIFCM-M	14.8	49.0	49.0	6.0

TYPE SL3 STEEL SQUARE POLES

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **650B5 807B 24 6 PLP SF DGP**

Label	Qty	Label	Arrangement	LLF	Description	Lum. Watts	Arr. Watts	Total Watts	Lumens/Lamp
SL3	6	SL3	SINGLE	0.720	GFM-3-400-PSMV-F 5SOBO S11G 24 S 5BC	452	452	2712	44000
W1	11	W1	SINGLE	0.720	SIFCM-WB-150-MH-F	185	185	2035	14000
SL3-H	2	SL3-H	SINGLE	0.720	GFM-3-400-PSMV-F-HSS 5SOBO S11G 24 S 5BC WITH GLARE SHIELD	452	452	904	44000

STEEL SQUARE POLES

POLE SHAFT - Pole shaft is electro-welded ASTM-A500 Grade 2 steel tubing with a minimum yield strength of 50,000 psi. On 1000 lb. steel poles, length is 5.8" O.D. high-strength steel. Total length is 6.4" length, diameter is 5.8" O.D.

HAND-HOLE - Standard hand-hole location is 12" above pole base. Pole 24' and above have a 3" x 6" reinforced hand-hole. Shorter poles have a 2" x 4" non-reinforced hand-hole.

BASE - Pole base is ASTM-A36 hot-rolled steel plate with a minimum yield strength of 50,000 psi. Finished square base cover is optional.

ANCHOR BOLTS - Poles are furnished with anchor bolts featuring zinc-plated double nuts and washers. Galvanized anchor bolts are optional. Anchor bolts conform to ASTM F 1554-07a Grade 55 with a minimum yield strength of 50,000 psi.

GROUND LUG - Ground lug is standard.

DUPLEX RECEPTACLE - Weatherproof duplex receptacle is optional.

GROUND FAULT CIRCUIT INTERRUPTER - Ground fault circuit interrupter is optional.

FINISHES - Each pole is finished with Duragrip® LEI's based on polyester powder finishing process which electrostatically applies and has a polymer powder to the pole. Provides an extremely smooth and uniform finish to withstand extreme weather changes without cracking or peeling, and features a five-year limited warranty. Optional Duragrip® Plus features the added protection of a 0.3 to 0.5 mil thickness of polyester powder finish plus an inner coating, as well as a seven-year limited warranty.

DETERMINING THE LUMINAIRE/POLE COMBINATION FOR YOUR APPLICATION:

- Select luminaires from luminaire ordering information.
- Select bracket configuration if required.
- Determine EPA value from luminaire/bracket EPA chart.
- Select pole height.
- Select (W/F) to match wind speed in the application area. (See wind speed map).
- Confirm pole EPA equal or exceeding value from above space.
- Consult factory for special wind load requirements and banner brackets.

DRILLING LOCATIONS

SHIPPING WEIGHTS - Steel Square Poles

Order Number	Net Weight (Lbs.)	Length (Inch)	Width (Inch)	Height (Inch)
650B5	10.4	49.0	49.0	4.0
650B6	14.8	49.0	49.0	6.0
650B8	20.2	49.0	49.0	8.0
650B10	26.6	49.0	49.0	10.0

TYPE SL3 STEEL SQUARE POLES

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **650B5 807B 24 6 PLP SF DGP**

Label	Qty	Label	Arrangement	LLF	Description	Lum. Watts	Arr. Watts	Total Watts	Lumens/Lamp
SL3	6	SL3	SINGLE	0.720	GFM-3-400-PSMV-F 5SOBO S11G 24 S 5BC	452	452	2712	44000
W1	11	W1	SINGLE	0.720	SIFCM-WB-150-MH-F	185	185	2035	14000
SL3-H	2	SL3-H	SINGLE	0.720	GFM-3-400-PSMV-F-HSS 5SOBO S11G 24 S 5BC WITH GLARE SHIELD	452	452	904	44000

STEEL SQUARE POLES

POLE SHAFT - Pole shaft is electro-welded ASTM-A500 Grade 2 steel tubing with a minimum yield strength of 50,000 psi. On 1000 lb. steel poles, length is 5.8" O.D. high-strength steel. Total length is 6.4" length, diameter is 5.8" O.D.

HAND-HOLE - Standard hand-hole location is 12" above pole base. Pole 24' and above have a 3" x 6" reinforced hand-hole. Shorter poles have a 2" x 4" non-reinforced hand-hole.

BASE - Pole base is ASTM-A36 hot-rolled steel plate with a minimum yield strength of 50,000 psi. Finished square base cover is optional.

ANCHOR BOLTS - Poles are furnished with anchor bolts featuring zinc-plated double nuts and washers. Galvanized anchor bolts are optional. Anchor bolts conform to ASTM F 1554-07a Grade 55 with a minimum yield strength of 50,000 psi.

GROUND LUG - Ground lug is standard.

DUPLEX RECEPTACLE - Weatherproof duplex receptacle is optional.

GROUND FAULT CIRCUIT INTERRUPTER - Ground fault circuit interrupter is optional.

FINISHES - Each pole is finished with Duragrip® LEI's based on polyester powder finishing process which electrostatically applies and has a polymer powder to the pole. Provides an extremely smooth and uniform finish to withstand extreme weather changes without cracking or peeling, and features a five-year limited warranty. Optional Duragrip® Plus features the added protection of a 0.3 to 0.5 mil thickness of polyester powder finish plus an inner coating, as well as a seven-year limited warranty.

DETERMINING THE LUMINAIRE/POLE COMBINATION FOR YOUR APPLICATION:

- Select luminaires from luminaire ordering information.
- Select bracket configuration if required.
- Determine EPA value from luminaire/bracket EPA chart.
- Select pole height.
- Select (W/F) to match wind speed in the application area. (See wind speed map).
- Confirm pole EPA equal or exceeding value from above space.
- Consult factory for special wind load requirements and banner brackets.

DRILLING LOCATIONS

SHIPPING WEIGHTS - Steel Square Poles

Order Number	Net Weight (Lbs.)	Length (Inch)	Width (Inch)	Height (Inch)
650B5	10.4	49.0	49.0	4.0
650B6	14.8	49.0	49.0	6.0
650B8	20.2	49.0	49.0	8.0
650B10	26.6	49.0	49.0	10.0

TYPE W1 SIERRA FULL CUTOFF WALL PACK

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **SIFCM WB 100 MH F MT BRZ**

Label	Qty	Label	Arrangement	LLF	Description	Lum. Watts	Arr. Watts	Total Watts	Lumens/Lamp
SL3	6	SL3	SINGLE	0.720	GFM-3-400-PSMV-F 5SOBO S11G 24 S 5BC	452	452	2712	44000
W1	11	W1	SINGLE	0.720	SIFCM-WB-150-MH-F	185	185	2035	14000
SL3-H	2	SL3-H	SINGLE	0.720	GFM-3-400-PSMV-F-HSS 5SOBO S11G 24 S 5BC WITH GLARE SHIELD	452	452	904	44000

SIERRA FULL CUTOFF WALL PACK

HOUSING - The one-piece die-cast aluminum housing is available in medium and large sizes. The attractive one-piece housing provides a clean appearance, increasing structural strength, and ensures weather-tight operation.

WALL MOUNT - For installation convenience, each fixture is shipped complete with ready-to-install hardware and plugs, providing 1/2" knockout outlets for surface conduit. Not recommended for ceiling mounting.

DOOR FRAMES - Door fasteners have two captive stainless steel screws to ensure proper closure.

LENS/BARNET - A flat clear tempered glass lens is sealed to the lens frame with silicone putty. The die-cast aluminum lens frame is designed for easy front servicing. The lens frame has a one-piece silicone continuous gasket for maximum sealing to the housing.

SOCKETS - Poles are supplied with sockets for pole-mounted luminaires.

FINISHES - Standard finish colors are bronze, black, and white.

PHOTOMETRICS - Please refer our website at www.lei.com for detailed photometric data.

SHIPPING WEIGHTS - Sierra

Order Number	Net Weight (Lbs.)	Length (Inch)	Width (Inch)	Height (Inch)
SIFCM	6.18	49.0	49.0	4.0
SIFCM-L	11.84	49.0	49.0	4.0
SIFCM-M	14.8	49.0	49.0	6.0

CBMC LIGHTING DISTRIBUTION

5855 Kopetsky Drive Suite G
Indianapolis, IN 46217
Tel. 317-780-8350 Fax. 317-780-8358

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PROJECT #
CB3685 R1

2600 SHADELAND STATION
INDIANAPOLIS, IN 46228
TEL. 317.547.5550 FAX 317.543.0270
www.structurepoint.com

AMERICAN STRUCTUREPOINT INC.

CERTIFIED BY

PREPARED FOR:
MAINSTREET PROPERTY GROUP, LLC
109 W. JACKSON STREET
CICERO, INDIANA 46034

PROJECT:
SKILLED CARE AND ASSISTED LIVING FACILITY
186TH STREET
WESTFIELD, INDIANA

DATE: 02/03/12
DRAWN BY: WCP (CBMC)
CHK'D BY: KDK
JOB NO. 201100738

REVISIONS

SHEET NO.
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