



Drainage Report
Franklin Transfer Station
Franklin, Indiana

Prepared: 02/04/21

Prepared for:

Best Way Disposal
2577 Kentucky Ave
Indianapolis, Indiana 46221



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Introduction

The purpose of this report is to document the design of the stormwater conveyance system for the proposed Industrial development known as Franklin Transfer in Franklin, Indiana.

Existing Conditions

The existing site is characterized by a 10,000 SF transfer station building. The ground cover is asphalt, concrete and gravel. The drainage pattern is generally from south to north. Stormwater accumulates at the north end of the site and is conveyed offsite by a 15" storm pipe.

Proposed Conditions

A new 14,200 SF transfer building will be constructed at the north end of the site as shown on the drawings. An associated concrete approach will also be constructed to the south of the new building. A ramp will be constructed at the southwest corner of the new building. The purpose of the ramp is to facilitate entry of solid waste trucks for loading. The existing 15" storm pipe will be shortened to accommodate the construction of the building. A catch basin will be construction over the south end of the shortened pipe.

Stormwater Considerations

The site will be graded to sheet stormwater to the west into the beginning of a ditch. The ditch will convey stormwater northward to the northwest corner of the site and then eastward to the new catch basin constructed over the shortened 15" pipe. A second ditch will be constructed beginning at the northeast corner of the site and leading west to the new catch basin as described.

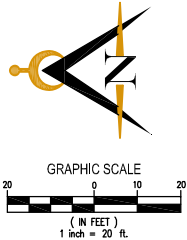
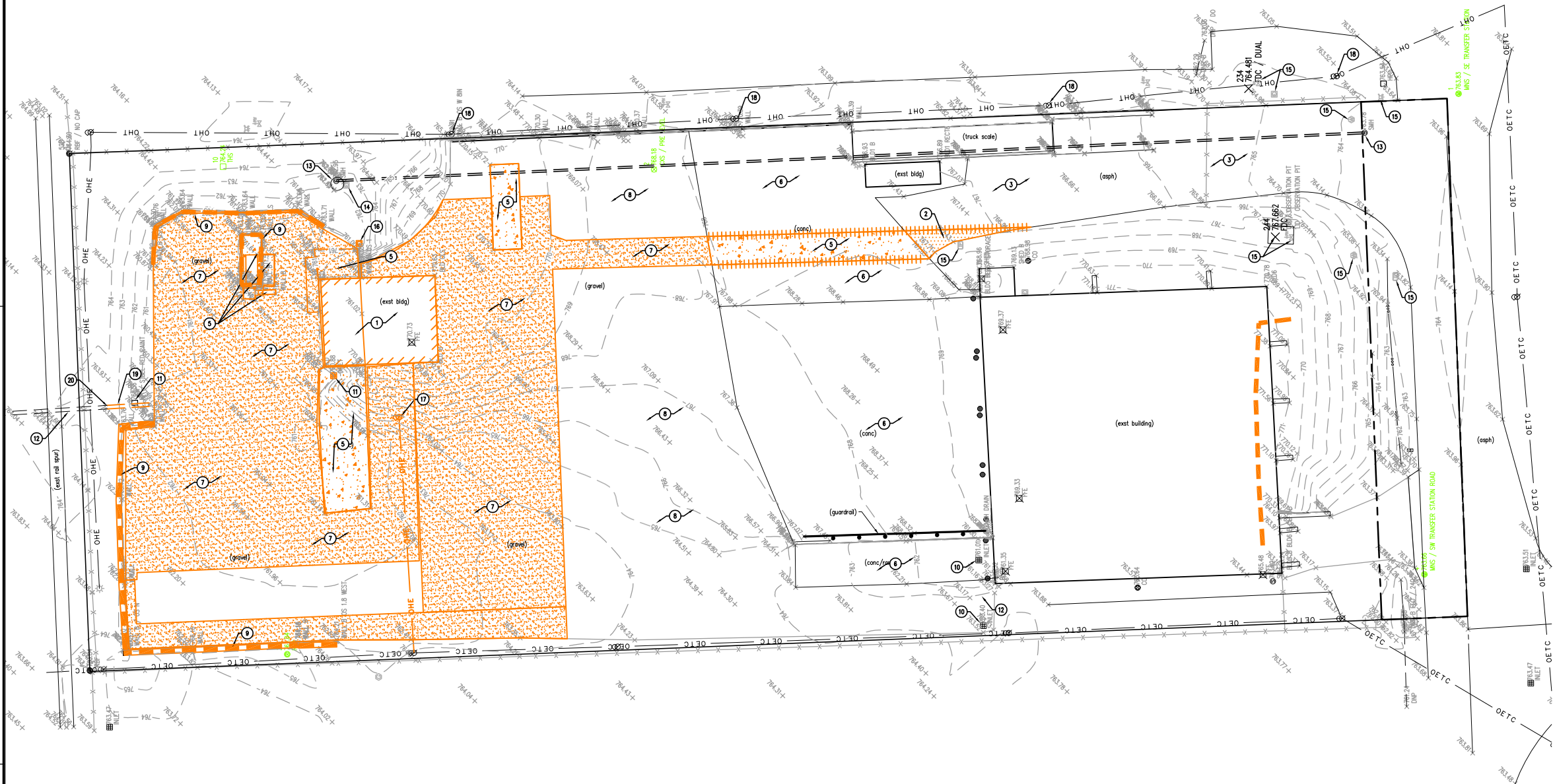
The ramp area of approximately 50'x16' will collect stormwater which will be pumped out. The forcemain will lead from the sump pit to the new catch basin being constructed northward from the sump and then eastward from the northwest building corner. Using guidance from HEC-24, the pump is sized to accommodate twice the peak flow from 50 yr -24 hr event. The flow value used is calculated using the rational method, $Q = CIA$. Assuming $C = .9$ and $i = 10$, $Q = .9 \times 10 \times 50 \times 16 / 43560 = 0.165$ cfs. The design flow is double this value or 0.33 cfs (148 gpm). The 177 foot forcemain has been sized as a 4" diameter pvc pipe producing a velocity of 3.8 fps. The velocity is in the acceptable range being between 2 fps and 6 fps.

The pump would overcome a static head from 754.00 to 759.5 amounting to 5.5 feet. The losses in the 177 feet of forcemain amounts to 3.2 feet. Minor losses are nearly 1.0 foot. The TDH is therefore $5.5 + 3.2 + 1.0 = 9.7$ feet. This requires a $\frac{3}{4}$ Hp pump.



Appendix "A"

Existing Conditions



LEGEND:	
	DESCRIPTION: SIGN
	WATER VALVE
	FIRE HYDRANT
	LIGHT POST
	GAS METER
	CLEAN-OUT
	ELECTRIC METER BOX
	GUARD POST
	6\"X6\" WOOD POST
	WATER METER
	AIR CONDITIONER UNIT
	YARD LIGHT
	REBAR SET/FOUND
	FLAT GRATE INLET
	COMBINATION POLE
	TELEPHONE PEDESTAL
	WOODEN LIGHT POLE
	CONIFEROUS TREE & SIZE
	DECIDUOUS TREE & SIZE
	BUSH
	DRAINAGE MANHOLE
	COMBINATION MANHOLE
	CURB INLET
	GROUND ACCENT LIGHT
	GUY WIRE
	UND.G. WATER LINE
	UND.G. GAS LINE
	UND.G. TELEPHONE LINE
	UND.G. ELECTRIC LINE
	VCP virrified clay pipe
	RCP reinforced concrete pipe
	PVC polyethylene coated pipe

DEMOLITION KEYNOTES

- EXISTING BUILDING TO BE REMOVED
- ASPHALT TO BE REMOVED
- ASPHALT TO BE PROTECTED THROUGHOUT DURATION OF CONSTRUCTION AND REMAIN IN PLACE
- SAWOUT PAVEMENT FULL DEPTH
- CONCRETE AND BASE TO BE REMOVED FULL DEPTH
- CONCRETE TO BE PROTECTED THROUGHOUT DURATION OF CONSTRUCTION AND REMAIN IN PLACE
- STONE TO BE REMOVED
- STONE TO REMAIN IN PLACE - REGRADE AS NEEDED
- CONCRETE BLOCK TO BE REMOVED
- STORM STRUCTURE TO BE PROTECTED THROUGHOUT DURATION OF CONSTRUCTION AND REMAIN IN PLACE
- STORM STRUCTURE TO BE REMOVED
- STORM PIPE TO BE PROTECTED THROUGHOUT DURATION OF CONSTRUCTION AND REMAIN IN PLACE
- SANITARY STRUCTURE TO BE PROTECTED AND REMAIN IN PLACE
- ELECTRICAL BOX TO BE PROTECTED THROUGHOUT DURATION OF CONSTRUCTION AND REMAIN IN PLACE
- UTILITY TO BE PROTECTED THROUGHOUT CONSTRUCTION
- UTILITY TO BE REMOVED
- POWER POLE TO BE REMOVED
- POWER POLE TO BE PROTECTED THROUGHOUT CONSTRUCTION
- STORM PIPE TO BE REMOVED
- PREPARE STORM PIPE FOR CONNECTION TO NEW STRUCTURE.

GENERAL NOTES

- THE CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL CODES, OBTAIN ALL PERMITS, AND GIVE NOTICES REQUIRED FOR EXECUTION OF THE WORK.
- ALL MATERIALS BEING REMOVED AND NOT RELOCATED UNDER THE NEW CONSTRUCTION, INCLUDING TREES, SHRUBS, SIGNS, UTILITIES, UTILITY STRUCTURES, ETC., SHALL BE FIRST OFFERED TO THE OWNER'S REPRESENTATIVE AND, IF NOT ACCEPTED, SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL CHARTED AND UNCHARTED UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
- THE CONTRACTOR SHALL VERIFY THE LIMITS OF DEMOLITION WITH THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK.
- IN AREAS WHERE EXISTING PAVEMENT, WALKS, OR CURBS ARE TO BE REMOVED, SAW CUT TO PROVIDE A CLEAN EDGE. COORDINATE EXTENT OF PAVEMENT DEMOLITION WITH THE LIMIT OF NEW IMPROVEMENTS ON THE SITE LAYOUT PLAN.
- THE CONTRACTOR SHALL COORDINATE PHASING OF THE DEMOLITION WITH THE OWNER'S REPRESENTATIVE, ADJACENT PROPERTY LANDOWNERS, UTILITY REGULATIONS AND LOCAL AUTHORITIES, WHERE APPROPRIATE, PRIOR TO BEGINNING WORK. DISRUPTION OF THE EXISTING UTILITIES SHALL BE MINIMIZED TO THE EXTENT POSSIBLE AND INITIATED ONLY AFTER APPROVAL BY UTILITY REGULATIONS AND LOCAL AUTHORITIES.
- CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE SUITABLY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND REMOVAL NECESSARY TO ACCOMPLISH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL CALL THE INDIANA ONE CALL SYSTEM, HOLEY MOLEY, OR OTHER REQUIRED UTILITY LOCATION COMPANIES 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION.
- THE CONTRACTOR SHALL PRESERVE AND PROTECT SURVEY CONTROL POINTS AND SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY DISTURBED CONTROL POINTS.
- EXISTING TREES TO BE PRESERVED ARE TO BE APPROPRIATELY BARRICADED PRIOR TO CONSTRUCTION.
- ALL STORM PIPE IS TO REMAIN IN PLACE. ADJUST STRUCTURE T.C.'s AS SHOWN.



REVISIONS:

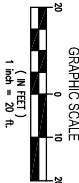
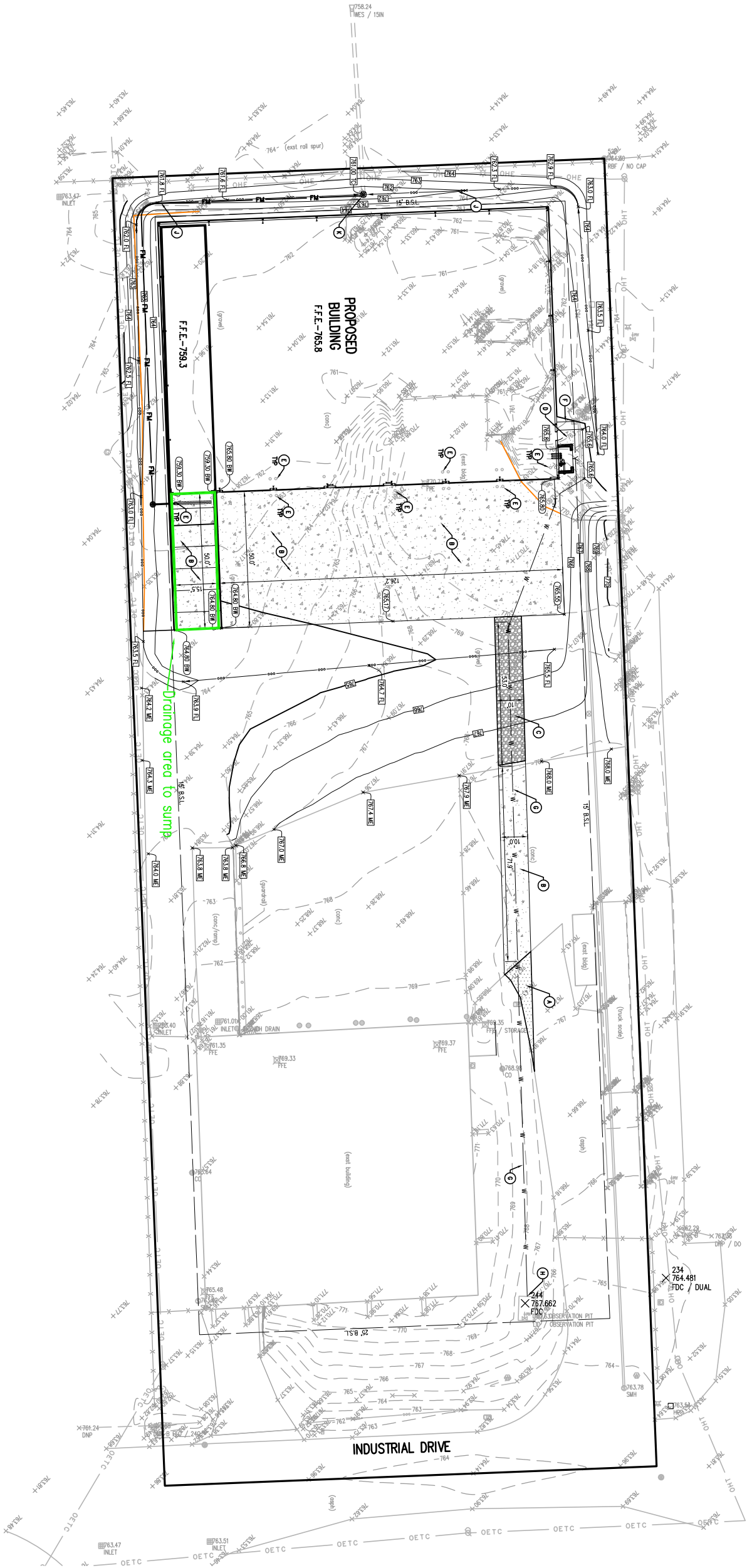
BEST WAY DISPOSAL
2577 KENTUCKY AVENUE
INDIANAPOLIS, INDIANA 46221
(800) 354-0830

FRANKLIN TRANSFER CENTER
BUILDING ADDITION
730 INDUSTRIAL DRIVE, FRANKLIN, IN 46131
Existing Conditions



Appendix "B"

Storm System



- GRADING LEGEND**
- Existing Storm Sewer
 - New Storm Sewer
 - Existing Sanitary Sewer
 - New Sanitary Sewer
 - Existing Contour
 - Proposed Contour
 - Existing Spot Elevation
 - New Pavement Grade
 - All Other Finish Grades
 - Match Existing Grades
 - Top of Curb Grade
 - Curb Gutter Grade
 - Surface Flow Arrow
 - Grade Break
 - Grade Flowline w/Grade
 - Existing Underground Gas Main
 - Existing Underground Electric
 - Existing Water Main
 - Existing Fireline
 - Swale Flow Line

- UTILITY LEGEND**
- Existing Storm Sewer
 - New Storm Sewer
 - Existing Sanitary Sewer
 - New Sanitary Sewer
 - Storm Structure Number
 - Sanitary Structure Number
 - 6" Subsurface Drain
 - Water Main
 - Existing Gas Main
 - Existing Telephone
 - Existing Water Main
 - Existing Fireline
 - Existing Overhead Utilities

- GENERAL NOTES**
1. IT SHALL BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR TO VERIFY ALL DIMENSIONS AND OTHER DIMENSIONS FOR 6" STANDING CURB ARE TO FACE OF CURB.
 2. ALL DIMENSIONS AND OTHER DIMENSIONS FOR 7" ROLL CURB ARE TO BACK OF CURB.
 3. IT SHALL BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR TO VERIFY ALL EXISTING UTILITIES AND CONDITIONS PERTAINING TO THE PHASE OF WORK. IF OWNERS OF THE VARIOUS UTILITIES FOR PROPER STAKE LOCATION OF EACH UTILITY BEFORE WORK IS STARTED. THE SUBCONTRACTOR SHALL NOTIFY IN WRITING THE OWNER AND THE ENGINEER OF ANY CHANGES, OMISSIONS OR ERRORS FOUND ON THESE PLANS OR IN THE FIELD BEFORE WORK IS STARTED OR RESUBMIT.
 4. ALL CONSTRUCTION ACTIVITY ON THIS SITE TO BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL STANDARDS FOR WORKER SAFETY, CONSTRUCTION STANDARDS, AND LOCAL STANDARDS.
 5. TEMPORARY TRAFFIC CONTROL, MAINTENANCE CONSTRUCTION SHALL CONFORM TO APPLICABLE STATE AND LOCAL STANDARDS.
 6. SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS.
 7. SEE PHOTOGRAPHIC PLAN FOR LIGHT LOCATIONS AND TYPE.
 8. SET TITLE SHEET COPIES FOR LEGAL DESCRIPTION AND RECORDING INFORMATION.

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 9. SERVICE STAKES SHALL BE NON-REINFORCED CONCRETE 4" THICK AND WITH 16" SPACING BETWEEN STAKES TO BE PLACED AT ALL WALK INTERSECTIONS AND BETWEEN WALKS AND PLAYERS. SERVICE STAKES ARE TO BE EQUALLY SPACED BETWEEN EXPANSION JOINTS. CONTRACTION JOINTS AND PERPENDICULAR SEAMS AT 5' INTERVALS OR LESS WITH A CONTRACTION JOINT EVERY 20' OR LESS.

- SITE KEYNOTES**
- Asphalt Pavement Section
 - Concrete Pavement Section
 - Gravel Pavement Section
 - 5" Concrete Sidewalk
 - Pipe Balled
 - Electrical Service
 - 6" Fire Protection Line
 - Connect Water to Existing Water Vault



FRANKLIN TRANSFER CENTER
BUILDING ADDITION
730 INDUSTRIAL DRIVE, FRANKLIN, IN 46131
Storm Map

PREPARED FOR:
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