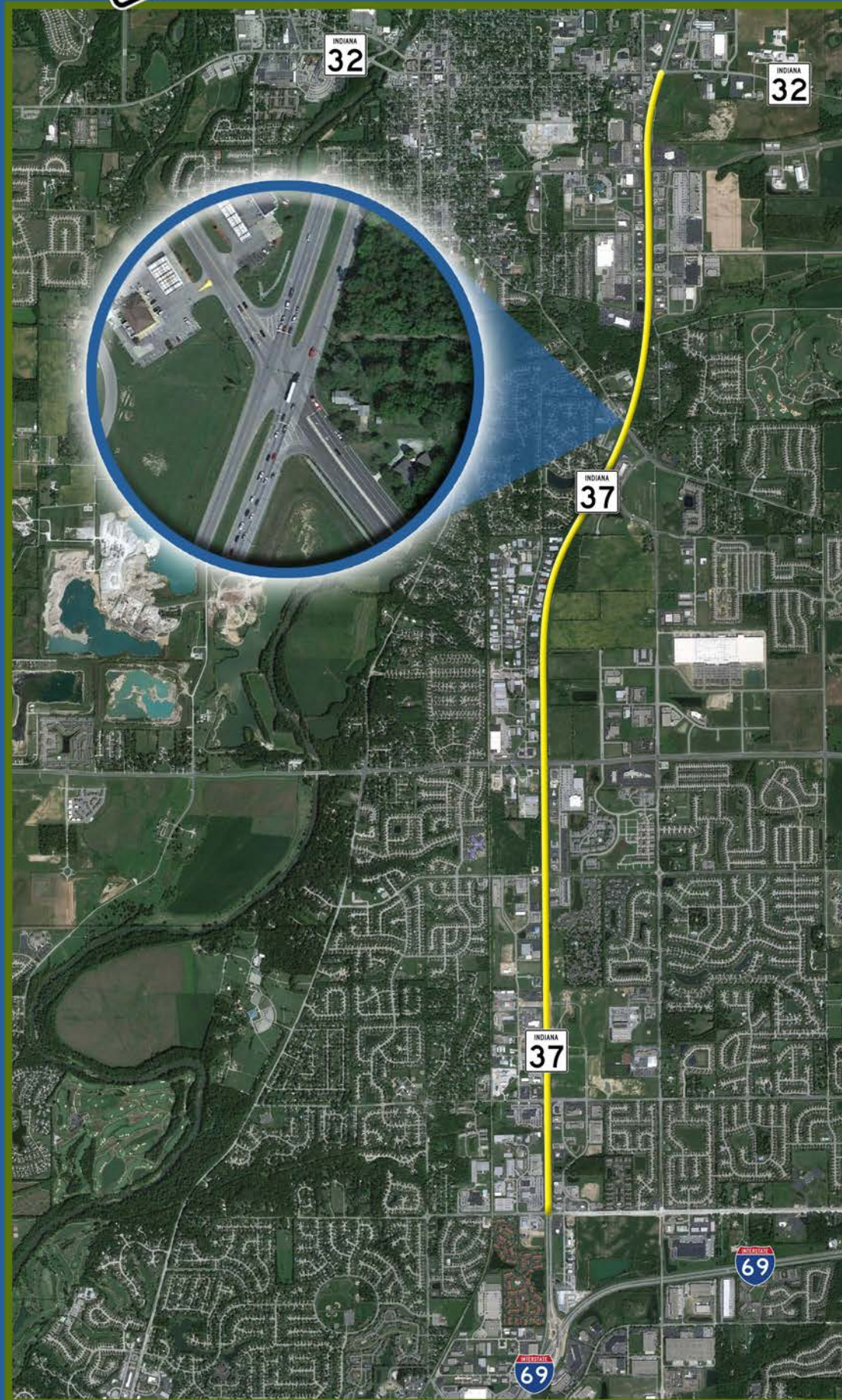




SR 37 MOBILITY STUDY



SR 37 AND GREENFIELD AVENUE

Presented to:



Presented by:





SR 37 Mobility Study Greenfield Avenue at SR 37

Description of Proposed Project

I. GENERAL

The Indiana Department of Transportation, the Indianapolis Metropolitan Planning Organization, Hamilton County, Town of Fishers, and City of Noblesville have identified the need to significantly improve the SR 37 corridor from 126th Street to SR 32 / SR 38. The Study area also extends along 146th Street from Allisonville Road to Cumberland Road. The Study was funded 80% by the Federal Highway Administration through the MPO with the remainder provided by Hamilton County.

II. PURPOSE

The purpose of the Study was to evaluate whether grade separation of the existing intersections would improve the traffic capacity, efficiency, and safety for the project corridors without the need to add additional travel lanes along this segment of the SR 37 corridor. This includes the basic concept of reconstructing each of the existing and anticipated signalized intersections through this segment of SR 37 to interchanges; thus eliminating the need for added travel lanes along the corridor. If this was shown to be an improvement, then the Study was to further identify a preferred design solution for future improvements along the SR 37 corridor and to identify potential environmental concerns that may be present, and to establish a reliable budget to construct these improvements.

The preferred design solution was defined to a level which will allow officials with the INDOT, MPO, Hamilton County, Town of Fishers, and the City of Noblesville to begin making necessary amendments to their requisite Planning Documents.

III. EXISTING FACILITY

The subject corridor is located in south central Hamilton County in Delaware and Noblesville Townships, and in the Town of Fishers and City of Noblesville. SR 37 runs south to north through Hamilton County; including the Study area. Additionally, SR 37 is intersected by I-69 immediately south of the Study area. SR 37 is designated as a state highway in central Indiana. Near the Study area SR 37 begins at I-69 and proceeds in a northerly direction before terminating in the City of Marion, Grant County. The items identified in bold below show the existing roadway system at SR 37 and Greenfield Avenue:

Table 1 – Existing Roadway System				
Facility	Traffic Control	Travel Lanes	Functional Classification	Speed Limit (MPH)
SR 37	-	4	Expressway	55
Greenfield Avenue	Signal	2	Primary Arterial	35 (West of SR 37) 40 (East of SR 37)

The following paragraphs give additional details for existing Greenfield Avenue within the Study area:

Greenfield Avenue

Greenfield Avenue crosses SR 37 at an approximate 30 degree skew to form a four way at-grade intersection. SR 37 is classified as an Expressway through the limits of this intersection and has limited access right of way. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition. Next to all SR 37 turn lanes at the intersection, the shoulders are four feet wide.

Greenfield Avenue is classified as a Primary Arterial through the limits of this intersection and is not access controlled. On the west side of the existing intersection, outside the intersection limits, Greenfield Avenue is a two lane roadway with two 12-foot travel lanes, and no shoulders or outside curbs. The existing pavement on the west side of the intersection is full depth HMA and is in good condition within 170 feet of the intersection. Outside of this area, the existing pavement is in poor condition with significant rutting and cracking, mainly in the westbound lane. Outside curb and gutter borders the south side of the roadway, however the north side has no curb and no shoulder.

On the east side of the existing intersection, outside the intersection limits, Greenfield Avenue is a two lane roadway with two 12-foot travel lanes, and no shoulders or outside curbs. The existing pavement on the east side of the intersection is full depth HMA and is in good condition. Outside curb and gutter borders both sides of the roadway. The eastbound and westbound lanes are separated by an eight foot raised center curb. An eight foot wide pedestrian pathway also runs along the south side of the roadway on the east side of the intersection, separated from the curb by a seven foot grass buffer strip.

The intersection of SR 37 and Greenfield Avenue is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, SR 37 has one left turn lane, two through lanes, and one right turn lane on each approach. Greenfield Avenue has one left turn lane, two through lanes, and one right turn lane on each approach.

The intersection is bordered by businesses in the southwest and northwest quadrants, and a residence in the northeast quadrant, and a vacant field in the southeast quadrant. The business and the residence in the north two quadrants are situated in closed proximity to the intersection

with little setback. For a listing of each business adjacent to the intersection, see the aerial displays.

IV. EVALUATED BUILD ALTERNATIVES

The Study evaluated two primary build alternatives: upgrading the existing SR 37 corridor with either teardrop roundabout interchanges (Alternative 1) or tight diamond interchanges (Alternative 2). Both alternatives will significantly improve traffic operations at the Study intersections.

V. TRAFFIC OPERATION ANALYSIS

Table 2 shows the results of the Capacity Analysis for the proposed improvements at SR 37 and Greenfield Avenue for the study year of 2036. A teardrop roundabout interchange is proposed, with a 4-lane bridge crossing SR 37.

Table 2 – Alternative 1 (2036) Capacity Analysis												
Intersection	Traffic Control	Peak	West Leg		East Leg		South Leg		North Leg		Overall	
			LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
SR 37 NB Ramps and Greenfield Avenue	Roundabout	AM	A	2.4	A	3.6	A	2.4	--	--	A	3.0
		PM	A	3.0	A	4.2	A	3.0	--	--	A	3.5
SR 37 SB Ramps and Greenfield Avenue	Roundabout	AM	A	3.0	A	2.4	--	--	A	3.0	A	2.7
		PM	A	3.6	A	1.8	--	--	A	3.0	A	3.0

Please see the Traffic Operation Analysis (binder labeled Traffic Operation Analysis) to review the Study area results in their entirety.

VI. GEOTECHNICAL EVALUATION

The corridor is located in a glaciated area. With the exception of the area near Stony Creek, the alignment is within a typical Central Indiana profile that consists of softer and moderate-plasticity clays overlying hard and low-plasticity clays, and bedrock is over 100 feet deep. The harder clays are usually within 20 feet of the surface. In addition, frequent seams and layers of granular soils can be encountered. This profile typically includes seasonal perched groundwater conditions within a few feet of the surface. From a design and construction perspective, CBR values are commonly in the range of 3 to 4, and subsurface drainage is typically required for pavement and below-grade structures (e.g., cut walls). Because of the perched groundwater and the clayey soils, improvement of the subgrade for support of pavement and construction activities is usually required, particularly in areas of cut. Support of bridges on driven piling and/or spread foundations is anticipated to be viable. In addition, support of MSE walls in these conditions typically includes preparation of the subgrade for the leveling pad and structure fill.

Cut walls over about 12 feet in height are anticipated to required tie-backs in order to control deflections, and the length of tie-backs is typically in the range of 25 to 50 ft.

In the area of Stony Creek, the soil profile is anticipated to be glacial outwash and/or alluvium (i.e., primarily granular soil), and bedrock could be within 50 to 100 feet of the surface. The issues related to shallow perched groundwater are usually not of concern because of the well-drained profile. However, if the piezometric groundwater level is relatively shallow, a large influx of groundwater can require temporary and permanent dewatering in areas of cut. An additional construction cost of \$500,000 is anticipated for each the Greenfield Avenue and Town and Country intersections to mitigate this condition.

A Geotechnical Evaluation will be required to evaluate the subsurface conditions and to provide the necessary information for a pavement design. This will include soil borings and a formal Geotechnical Report with recommendations that will be approved by INDOT.

VII. ENVIRONMENTAL INVESTIGATION

Improvements to this intersection will require the completion of an environmental document to qualify for federal funding. A Categorical Exclusion as falling within the guidelines of the National List of Categorical Exclusions will be required for this project. The Categorical Exclusion will need to be prepared in a manner consistent with the latest version of the "Indiana Categorical Exclusion Manual". The paragraphs below highlight the key environmental issues associated with the proposed project.

Wetland and Stream Impacts

The National Wetland Inventory (NWI) Map shows a forested wetland along Stony Creek approximately 2,300 feet north of Greenfield Avenue. A "Waters of the U.S." (wetland determination/delineation) report will be required to confirm and identify wetland boundaries throughout the corridor. Wetland impacts greater than 0.10 acre will require compensatory mitigation. Any Mitigation efforts should be coordinated with the U.S. Army Corps of Engineers and Indiana Department of Environmental Management.

Historic and Cultural Resources

Archeological: The proposed project will result in the acquisition of undisturbed right-of-way. As a result, an Archaeological Records Review and Phase Ia Archaeological Survey will be required to identify potentially significant cultural resources within the preferred alignment.

Historical: The land use in close proximity and within the project area consists of commercial properties. The *Hamilton County Interim Report* shows no historic properties within the probable Area of Potential Effects. However, properties may have become 50 years of age since the publication of the interim report.

At a minimum, this project will require the completion of the following Section 106 documents: Phase Ia Archaeological Survey, Historic Properties Report and a Section 106 Findings and Determinations (36 CFR 800.11).

Hazardous Materials

A search of the red flag indicators revealed underground storage tank sites in the project vicinity. As a result, further investigation will be required to determine if the project would be impacted by hazardous materials.

Regulatory Permits

IDEM Section 401 Water Quality Certification: The preferred alternative will require Section 401 Water Quality Certification from the Indiana Department of Environmental Management.

US Army Corps of Engineers Section 404 Permit: The preferred alternative will require a Section 404 permit from the Louisville District, U.S Army Corps of Engineers.

IDEM Rule 5 Permit: Since the preferred alternative will disturb greater than one acre, Rule 5 administered through the Indiana Department of Environmental Management will apply to this project. The designer shall coordinate all erosion and sediment control measures with the Hamilton County Soil and Water Conservation District.

IDNR Construction in Floodway Permit: The proposed intersection improvements are within the floodway of Stony Creek. The proposed project will require formal approval from the Indiana Department of Natural Resources (IDNR) - Division of Water for Construction in a Floodway.

VIII. DRAINAGE

The existing drainage on Greenfield Avenue is conveyed on the southwest leg of the intersection by sheet draining the pavement to the outside curb and gutters, flowing out of curb turnouts into the existing ditch along SR 37. The drainage on the northwest leg of the intersection is conveyed by sheet draining the pavement into the ditch which flows into the ditch along SR 37. On the west leg of the intersection, the drainage is conveyed by sheet draining the pavement to the outside curb and gutters. Curb and gutter inlets are utilized to capture the storm water which flow away from SR 37. On mainline SR 37, the existing drainage is conveyed by an open grass median and outside ditches flowing north to Stony Creek about 2260 feet north of the intersection.

The proposed drainage on Greenfield Avenue will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to Stony Creek approximately 2260 feet north of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a low point of the profile. The manholes will convey the drainage to 2080 feet north of the intersection and outlet into the ditch along SR 37 and maintain positive drainage to Stony Creek.

IX. UTILITY COORDINATION

The following paragraphs give details pertaining to the presence of utilities at Greenfield Avenue and SR 37. This is followed by a discussion of potential impacts resulting from the project.

Existing Facilities

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, “Holey Moley” or the individual utilities can be contacted.

Electric: Overhead electric transmission cuts diagonally across the intersection from southwest to northeast corners. Overhead electrical distribution runs from the southwest to the northwest corner and along the north side of Greenfield Avenue. Electrical service to property owners is underground.

Gas: A gas pipeline is on the south side of Greenfield Avenue, east of SR 37, with service laterals to properties on both sides of the street. There is no evidence of a gas pipeline west of SR 37.

Telecommunication: Various telecommunications facilities are located on the overhead electrical, with underground service to properties on both sides of the street. Two “fiber optic” manholes are located on the south side of Greenfield Avenue, east of SR 37.

Water: The water main is on the south side of Greenfield Avenue with service laterals to properties on both sides of the street.

Sanitary: Sanitary manholes are located at the southeast corner of Prosperity Drive and Greenfield Avenue (west of SR 37) and at the southwest corner of Cumberland Road and Greenfield Avenue (east of SR 37). There is no evidence that these manholes are connected. Service laterals connecting properties on both sides of the street to the manholes are expected.

Street Lighting: Decorative street lights were added by the Town of Noblesville during the Greenfield Avenue project. They are located on both the north and south sides of Greenfield Avenue, east of SR 37. The spacing is approximately 300 feet.

Impacts

With Greenfield Avenue going over SR 37, existing underground facilities along Greenfield Avenue can either relocate lower (under SR 37) or attach their facilities to the bridge. Existing overhead facilities can remain if they do not conflict with the Greenfield Avenue bridge, offset their facilities north or south of the Greenfield Avenue bridge, or relocate underground. Service connections will also need to be adjusted.

If the sanitary sewer runs under SR 37, the trunkline will need to be either lowered or offset. Both options can severely impact a gravity-fed system, requiring a lift station to be constructed.

If utilities in their own easement are required to relocate, relocations expenses are reimbursable. Typically, overhead electrical transmission lines are located in easements due to the additional height of the facility and the complexity of the service. It is expected that this facility is in an easement. The anticipated reimbursable relocation cost to obtain new easements and to relocate this facility overhead within the new easement is \$750,000.

All other existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

X. PROPOSED INTERSECTION FACILITY

SR 37

Existing SR 37 is a four lane expressway with four 12-foot travel lanes, four foot inside shoulders, and ten foot outside shoulders. The northbound and southbound travel lanes are separated by a 50 foot open grass median (inside travel lane to inside travel lane). The existing right-of-way along SR 37 varies from mostly 85 feet to 95 feet from centerline on both sides. Many businesses line each side of the SR 37 right-of-way throughout the Study limits. The interchanges proposed in this Study require auxiliary lanes, ramp junctions, and ramp lanes adjacent to SR 37 travel lanes approaching each interchange from each side. Additional right-of-way will be required in many locations adjacent to ramp lanes and junctions. In an effort to minimize the amount of right-of-way required and the impacts to existing businesses, it is proposed that the SR 37 median be enclosed with a center median barrier and the SR 37 travel lanes be shifted in to narrow the width of the roadway through the interchange limits.

A 14.5 foot median is proposed, consisting of six foot inside shoulders and a 2.5 foot median barrier wall. Six foot is the desirable inside shoulder width required using Table 53-6 from the Indiana Design Manual (IDM). See the typical cross sections in this Study for full roadway dimensions. If any, one isolated interchange is constructed, the SR 37 travel lanes would shift back out on the north and south sides of the interchange to match the existing travel lanes and median width. As consecutive interchanges are constructed, it will not be feasible to shift lanes out to the existing median width and back in between most interchanges. If all interchanges were built concurrently, the median would remain enclosed from the south side of 126th Street to the north side of 146th Street, and from the south side of Town & Country Boulevard to the north side of SR 32 / SR 38. As there is sufficient distance between 146th Street and Greenfield Avenue, the travel lanes north of 146th Street could shift out the existing median width even if the 146th Street and Greenfield Avenue interchanges were constructed at the same time or consecutively. Furthermore, because of the layout and surrounding parcels at Greenfield Avenue, it is feasible to maintain the existing open median width through this location even when the proposed interchange is constructed. Where this is cost prohibitive at other locations due to right-of-way and business impacts associated with the wider roadway, it is economically feasible at the Greenfield Avenue Interchange. The travel lanes would shift back into an enclosed median south of Town and Country Boulevard and remain enclosed to north of SR 32 / SR 38, where the lanes would shift back out to meet the existing pavement.

This Study focuses on the interchanges; however the treatment of SR 37 proper, between the interchanges will be affected by each interchange's traffic and proximity to each other. The geometrics developed for this Study are unique to each area between interchanges according the findings of the Traffic Operations Analysis (TOA) conducted as part of this Study. In each segment between interchanges, in both directions, there will be an entrance ramp junction from one interchange followed by an exit ramp junction to the next interchange. This creates weaving areas between the interchanges, which were analyzed in the TOA. Some weaving

areas were acceptable and are recommended. Other weaving areas are not acceptable and have been removed by interconnecting consecutive interchanges with collector distributor lanes. See the TOA for the discussion and results of the weaving analysis conducted between interchanges. Below is a summary of the proposed configuration of SR 37 near Greenfield Avenue:

Between 146th Street and Greenfield Avenue

Both northbound and southbound weaving segments are acceptable. The northbound entrance ramp from 146th Street and the northbound exit ramp to Greenfield Avenue will be conventional entrance and exit ramps. The southbound entrance ramp from Greenfield Avenue and the southbound exit ramp to 146th Street will be conventional entrance and exit ramps. There will not be a continuous auxiliary lane between interchanges in both directions.

North of 146th Street, the travel lanes will shift out to transition from the enclosed median to the existing open median. This will eliminate the necessity to reconstruct SR 37, for the sake of enclosing the median, from north of 146th Street to Greenfield Avenue. This area can then be evaluated for replacement based solely on the condition of the pavement at the time of interchange construction, and not out of necessity to construct either interchange.

Between Greenfield Avenue and Town and Country Boulevard

Both northbound and southbound weaving segments are acceptable. The northbound entrance ramp from Greenfield Avenue and the northbound exit ramp to Town and Country Boulevard will be conventional entrance and exit ramps. The southbound entrance ramp from Town and Country Boulevard and the southbound exit ramp to Greenfield Avenue will be conventional entrance and exit ramps. There will be a continuous auxiliary lane between interchanges in both directions.

Between these two interchanges, the travel lanes will need to shift inward to transition from the existing open grass median carried through the Greenfield Avenue interchange, to the proposed enclosed median prior to the Town and Country Boulevard interchange.

Greenfield Avenue

The preferred alternate for this intersection is to construct a “teardrop” roundabout interchange on Greenfield Avenue consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. Greenfield Avenue will overpass SR 37. SR 37 will be free-flow through this interchange and traffic traveling through on Greenfield Avenue will drive through the roundabouts with a yield condition on the roundabout approach. The current skew of Greenfield Avenue through this interchange will be maintained, as straightening the skew would require the re-alignment of Greenfield Avenue and potential impact two businesses in the southwest quadrant and/or two additional residences in the northeast quadrant.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will

remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach Greenfield Avenue. Exterior walls will also be necessary in the southwest and northwest quadrants to minimize impacts to businesses in these quadrants (See aerial sheets for estimated wall limits). The residence in the northeast quadrant will be in conflict with the east roundabout and exit ramp, thus will need to be relocated to construct this interchange.

Greenfield Avenue will have two lanes in each direction through the east/west portion of the roundabouts. On both approaches there will be one shared left/through lane, and one shared through/right lane. Both the northbound and southbound exit ramps will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through lane, one right turn lane. The entrance ramps will both be one lane entrances. For a diagram of the proposed lane configuration see the Traffic Operations Analysis (binder labeled Traffic Operation Analysis).

Two current drive accesses off Greenfield Avenue will need to be removed due to their close proximity to the interchange and the vertical difference of proposed Greenfield Avenue in the area of the drives. One of these drives accesses the Marathon gas station in the southwest quadrant. This business will maintain access to Greenfield Avenue by way of a second existing drive located approximately 150 feet north of the removed drive. The other drive to be removed accesses the Gas America gas station in the northwest quadrant. This business will maintain access to Greenfield Avenue by way of a second existing drive located approximately 150 feet north of the removed drive.

XI. PROPOSED BRIDGE FACILITY

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at Greenfield Ave is anticipated to be a two span, 198.5 foot long, prestressed reinforced concrete bulb tee beam structure built with a 38 degree skew to the roadway. The bridge will be a four lane roundabout facility with a clear roadway width of 232'-8" and an out to out coping of 236'-0". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

XII. MAINTENANCE OF TRAFFIC

The following is a logical basic MOT plan for the construction of the Greenfield Avenue interchange:

Phase 1 – The southbound SR 37 travel lanes will be widened to the inside with temporary widening. Temporary cross-overs will be constructed in the median to the north and south of the interchange.

Phase 2 – All SR 37 traffic will run on the southbound side with two travel lanes in each direction. The southbound travel lanes will be shifted west to run on the existing outside shoulder. The northbound traffic will be switched over to the southbound side to run on the temporary widening constructed in phase 1.

The northbound half of mainline SR 37 will be constructed. A temporary cut wall will be constructed “top down” between the existing southbound lanes and the proposed northbound lanes through the interchange area where SR 37 will be depressed.

The northbound exit and entrance ramps will be constructed up to the proposed roundabout. A temporary connection will be constructed across the proposed roundabout area connecting the top of the northbound exit ramp and the top of the northbound entrance ramp.

The east end bent for the proposed bridge will also be constructed in this phase.

The east segment of Greenfield Avenue will be closed, with no access to SR 37. The east segment of Greenfield Avenue and roundabout approaches will be constructed.

The west segment of the Greenfield Avenue will maintain access to SR 37. This could be set up as right-in/right-out access to and from Greenfield Avenue with SR 37 traffic remaining free-flow through the intersection. Alternatively, a temporary signal could be utilized to allow the west Greenfield Avenue protected access to and from both directions of SR 37.

Phase 3 – All SR 37 traffic will run on the proposed northbound lanes and shoulders constructed in phase 2, with two lanes in each direction. The southbound lanes will be switched over to the northbound side to run on the proposed northbound lanes constructed in phase 2. The northbound lanes will run up the proposed northbound exit ramp, across the temporary connection, and back down the proposed northbound entrance ramp all constructed in phase 2.

The southbound half of mainline SR 37 will be constructed, as well as the west segment of Greenfield Avenue and the west roundabout. Both sides of Greenfield Avenue will have no access to or from SR 37 in this phase. However, temporary connections could be constructed on the east side between the portion of the east Greenfield Avenue segment constructed in phase 2 and the northbound SR 37 travel lanes. If desired, this could be done to keep access to and from northbound SR 37 and the east side of Greenfield Avenue in this phase.

XIII. LAND ACQUISITION

Approximately 38 parcels would be impacted by the construction of the teardrop roundabout interchange at the intersection of SR 37 and Greenfield Avenue. Total permanent right of way acquisition required for construction of these improvements would be approximately 6.0 acres.

Because the project would likely utilize federal aid, future land acquisition would need to adhere to the *Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs Act*. This process includes title research, right-of-way engineering, appraisal problem analysis (APA), an appraisal, a review appraisal and negotiations/buying with the property owner.

All existing right-of-way would be verified during the land acquisition process, which may reveal the need for additional parcels. If recorded documents do not exist, it may be necessary to reacquire portions of the apparent existing right-of-way, which could also increase the anticipated number of parcels and costs affiliated with those additional parcels.

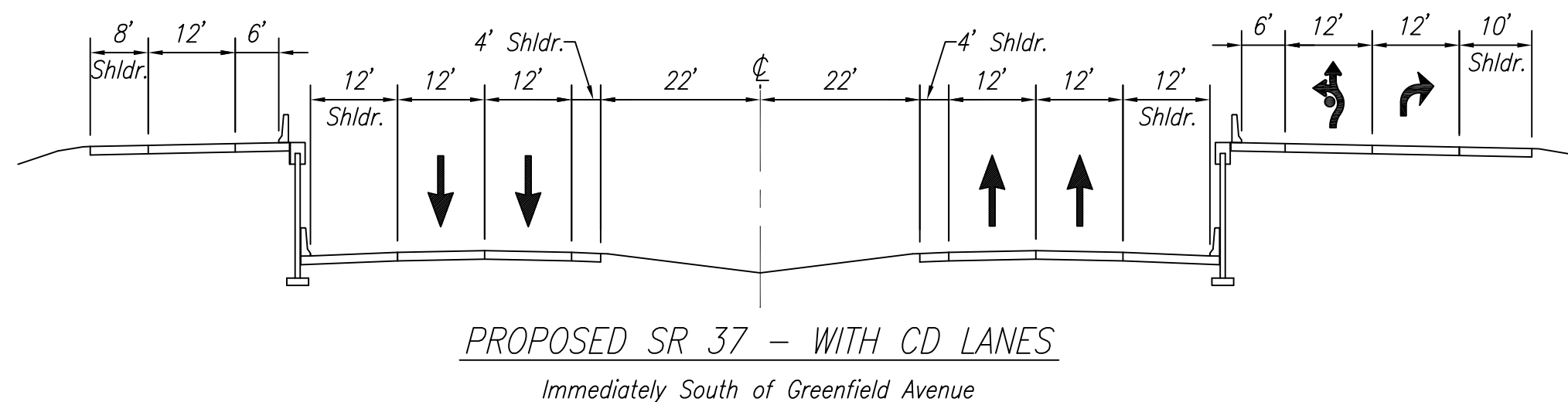
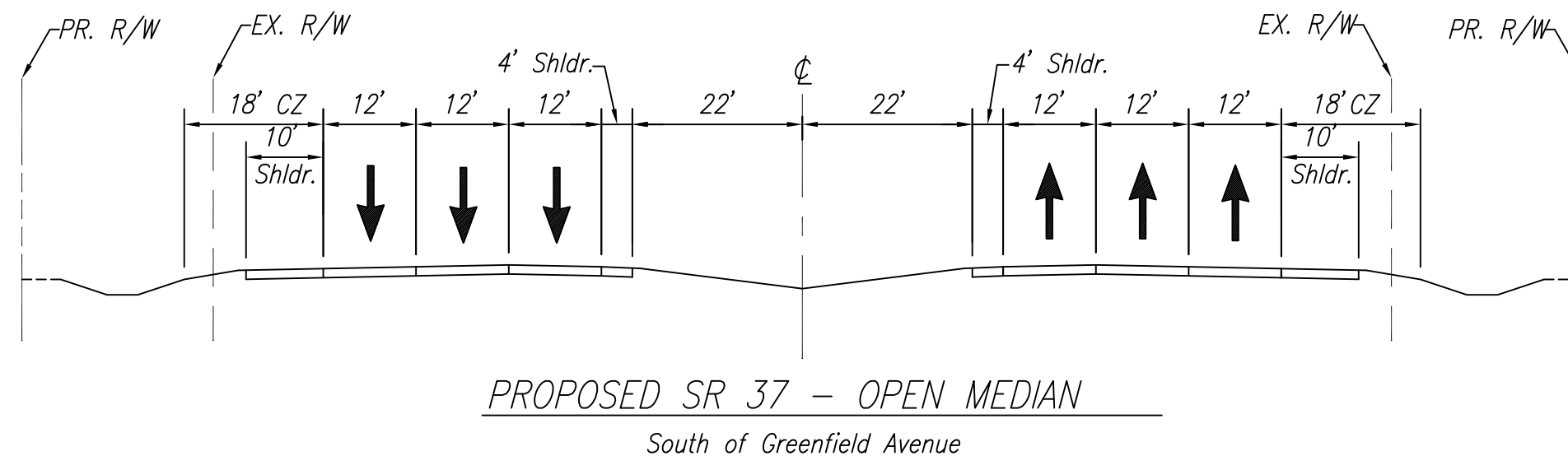
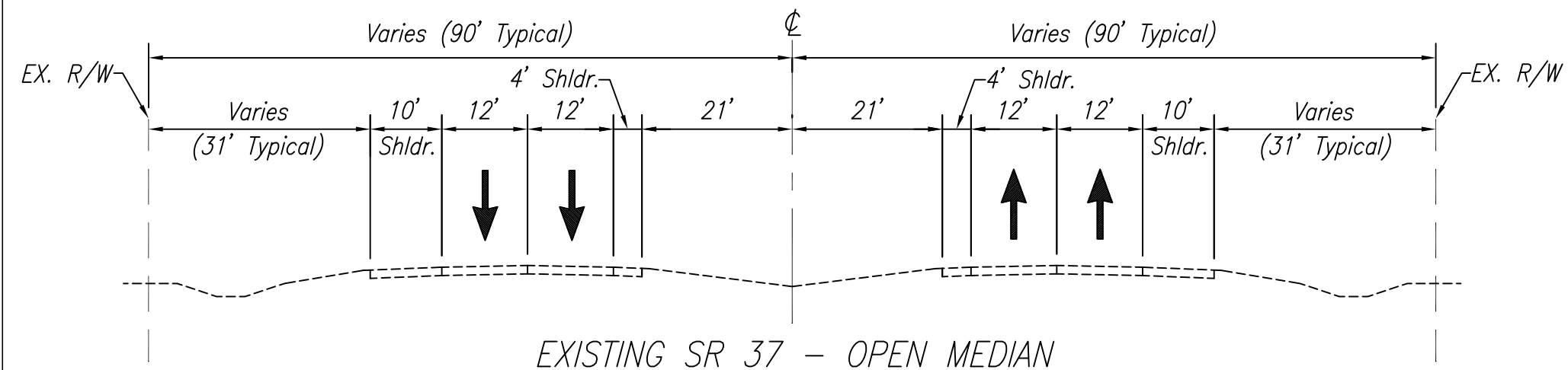
XIV. PROJECT PRIORITIES

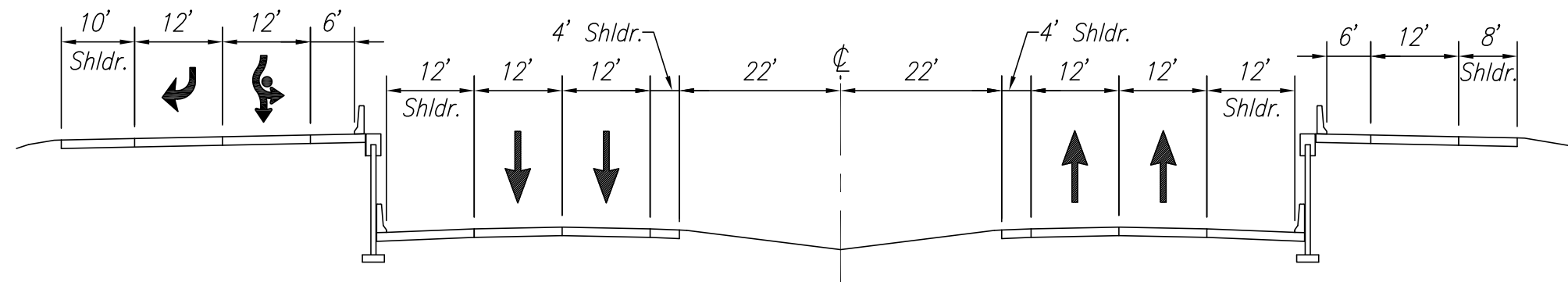
Table 3 below indicates the priority for construction of the proposed improvements. The ranking as shown generally flows south to north but can be revised without affecting the integrity of constructing methodologies.

Table 3 – Construction Priorities		
Priority Rank	Binder Number	Intersection
1.	5	SR 37 at 146 th Street
2.	10	146 th Street at Allisonville Road
3.	1	SR 37 at 126 th Street
4.	2	SR 37 at 131 st Street
5.	3	SR 37 at 135 th Street
6.	4	SR 37 at 141 st Street
7.	6	SR 37 at Greenfield Avenue
8.	7	SR 37 at Town and Country Boulevard
9.	8	SR 37 at Pleasant Street
10.	9	SR 37 at SR 32 / SR 38

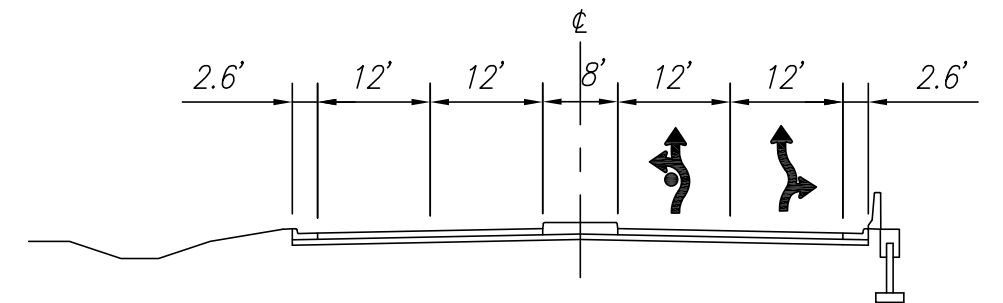
XV. PROJECT BUDGET

At the intersection of SR 37 and Greenfield Avenue, a teardrop roundabout interchange is proposed, with a 4-lane bridge crossing SR 37. In order to construct these improvements, it is anticipated that construction cost will be \$24,886,132 in year 2024.

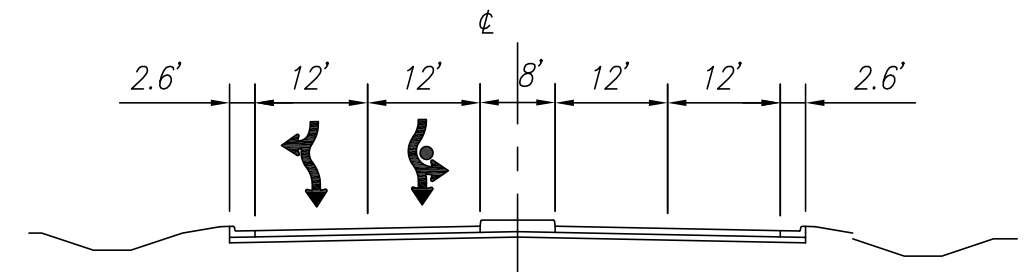




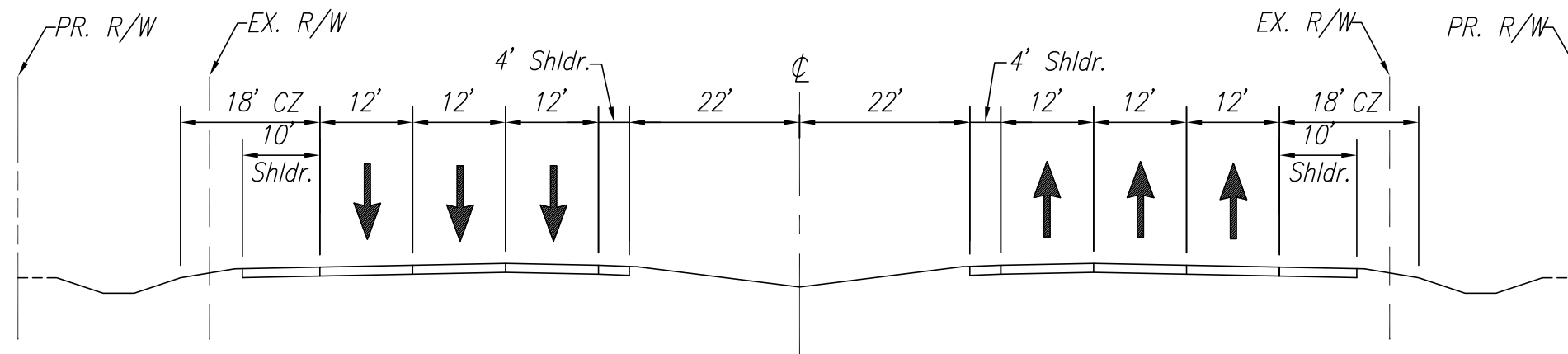
PROPOSED SR 37 – WITH CD LANES
Immediately North of Greenfield Avenue



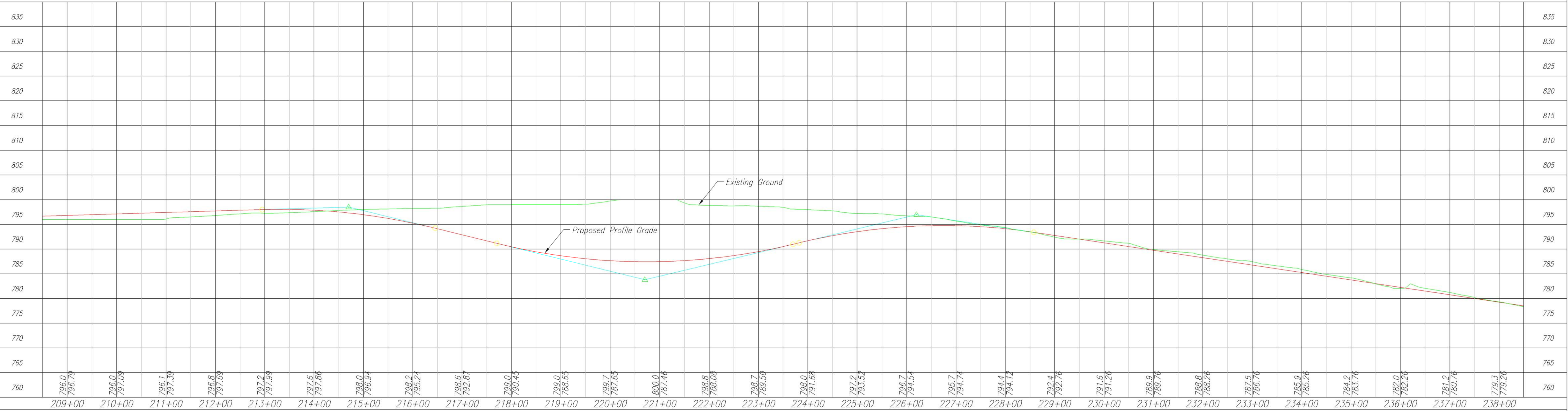
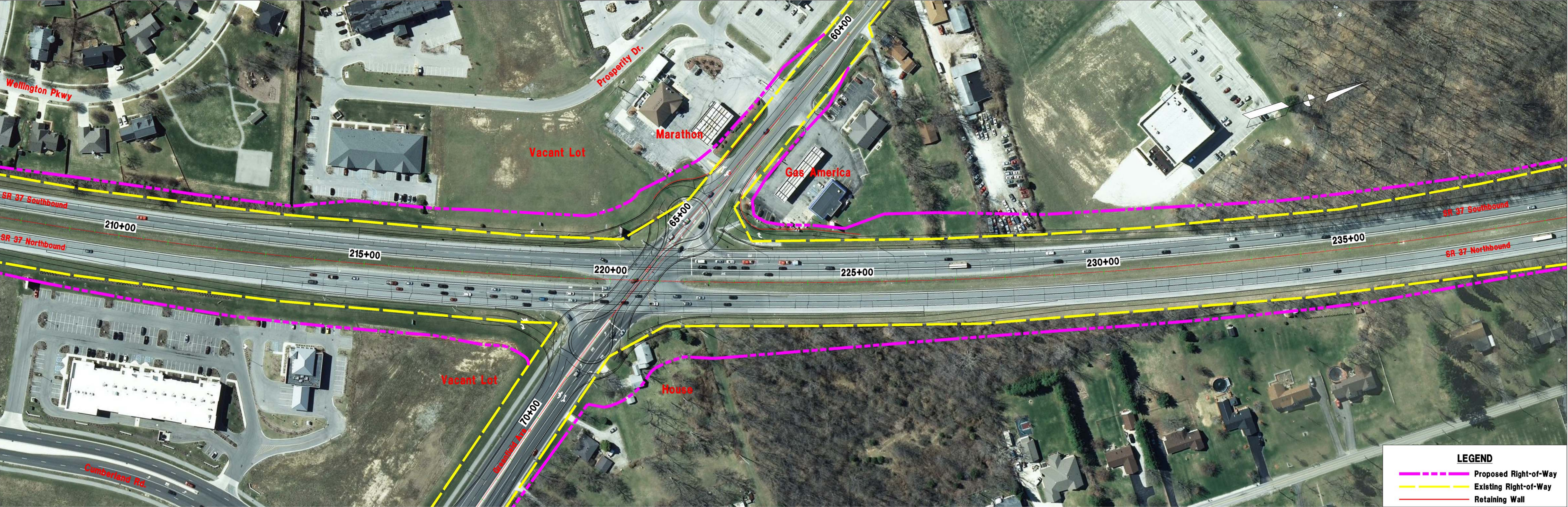
PROPOSED Greenfield Avenue
East leg approaching intersection



PROPOSED Greenfield Avenue
East leg departing intersection



PROPOSED SR 37 – OPEN MEDIAN
North of Greenfield Avenue





SR 37 MOBILITY STUDY

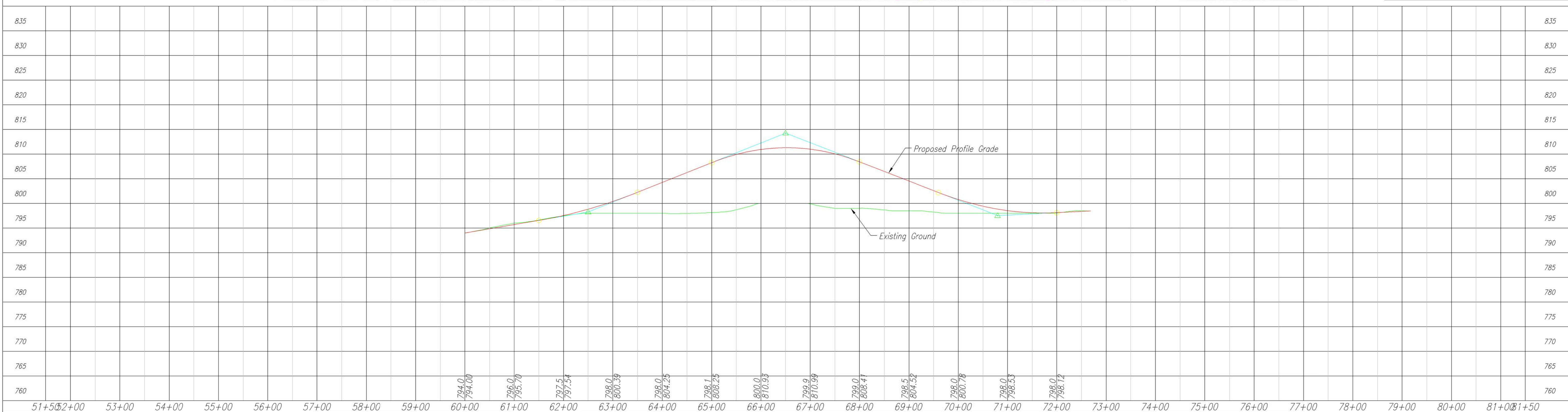
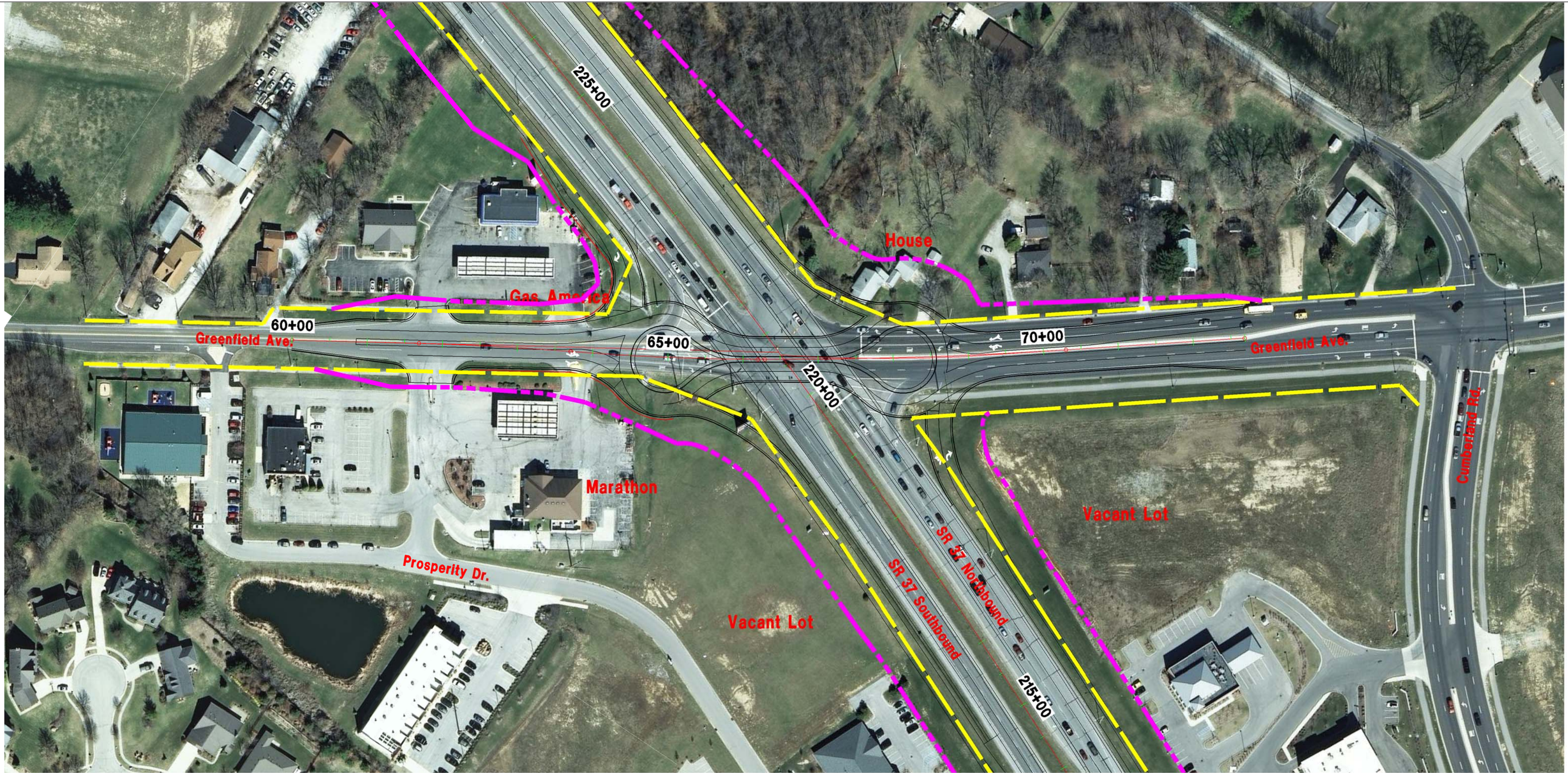


UNITED
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AMERICAN
STRUCTUREPOINT
INC.

**PROPOSED TEARDROP
ROUNDAABOUT INTERCHANGE
SR 37 & GREENFIELD AVENUE**





SR 37 MOBILITY STUDY



**PROPOSED TEARDROP
ROUNDAABOUT INTERCHANGE
GREENFIELD AVENUE & SR 37**



Greenfield Avenue Project Development Cost Summary

SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville

S.R. 37 from South of 126th Street to North of SR 38/32

PROJECT ITEMS:		PROJECT COST (IN YEAR OF EXPENDITURE)
GREENFIELD AVENUE		
Engineering Costs	\$	3,444,240
Construction Costs	\$	24,886,132
Construction Cost Contingencies	\$	2,488,613
Construction Inspection Costs	\$	3,732,919
Utility Relocation Cost	\$	1,080,000
Land Cost	\$	2,539,173
Subtotal Greenfield Avenue Interchange		\$34,726,838

* The Greenfield Avenue Interchange is projected to be constructed in 2024. An inflation factor of 1.469 has been applied to obtain the construction cost shown in this table

TOTAL INTERCHANGE COST:

\$34,726,838

Greenfield Avenue Construction Cost Summary

SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville

S.R. 37 from South of 126th Street to North of SR 38/32

MAJOR ELEMENT	BASE YEAR CONSTRUCTION COST (2012)
ROADWAY	\$ 10,890,866
GEOTECHNICAL MITIGATION	\$ 500,000
BRIDGE (Greenfield Avenue Over S.R. 37)	\$ 5,550,000
LIFT STATION	\$ -
TOTAL CONSTRUCTION COST:	\$ 16,940,866



ROAD ESTIMATE

PRICING REPORTDate: 12/19/2012
Time: 14:45:08Project: **SR 37 Mobility Study - Greenfield Ave**
Location: **Greenfield Ave Interchange**
County: **HAMILTON**
District: **Crawfordsville**Project ID: **10-703 (6)**
Bid Date: **/ /** State: **IN**
Route: **SR 37**

Sect	Pay Item	Description	Quantity	Unit	Bid Price	Extension	Alt
100	105-06845	construction engineering	1.000	L.S.	291,719.63	291,719.63	
100	110-01001	mobilization and demobilization	1.000	L.S.	486,199.39	486,199.39	
GENERAL PROVISIONS SUBTOTALS						777,919.02	
						7.1%	
200	201-52370	clearing right of way	1.000	L.S.	152,057.47	152,057.47	
200	202-02278	curb, concrete, remove	531.000	L.F.	4.45	2,362.95	
200	202-02279	curb and gutter, remove	2,160.000	L.F.	4.62	9,979.20	
200	202-93999	signal pole, remove	4.000	EACH	495.00	1,980.00	
200	203-02000	excavation, common	93,000.000	C.Y.	7.88	732,840.00	
200	205-06931	temporary check dam, revetment riprap	423.000	TON	38.84	16,429.32	
200	205-06937	temporary silt fence	500.000	L.F.	1.74	870.00	
200	207-08263	subgrade treatment, type ia	50,916.000	SYS	6.24	317,715.84	
200	207-08267	subgrade treatment, type iia	300.000	SYS	9.42	2,826.00	
200	211-09194	b borrow	32.693.000	TON	34.00	1,111,562.00	
200	211-09264	structural backfill, type 1	728.000	C.Y.	23.88	17,384.64	
200	211-09266	structural backfill, type 3	23,469.000	C.Y.	21.27	499,185.63	
EARTHWORK SUBTOTALS						2,865,193.05	
						26.3%	
300	301-07448	compacted aggregate, no. 53, base	3,683.000	TON	15.66	57,675.78	
300	302-06464	subbase for pccp	12,729.000	C.Y.	28.39	361,376.31	
300	303-01180	compacted aggregate, no. 53	2,582.000	TON	17.20	44,410.40	
300	306-08034	milling, asphalt, 1 1/2 in	11,313.000	SYS	1.30	14,706.90	
AGGREGATE PAVEMENT AND BASES SUBTOTALS						478,169.39	
						4.4%	
400	401-07328	qc/qa-hma, 3, 70, surface, 9.5 mm	934.000	TON	72.77	67,967.18	
400	402-10084	hma for temporary pavement, b	5,469.000	TON	50.00	273,450.00	
ASPHALT PAVEMENT SUBTOTALS						341,417.18	
						3.1%	
500	501-06266	profilograph, pccp	1.000	L.S.	15,000.00	15,000.00	
500	501-06323	qc/qa-pccp, 12 in	42,155.000	SYS	70.00	2,950,850.00	
500	503-05240	d-1 contraction joint	16,911.000	L.F.	9.19	155,412.09	
CONCRETE PAVEMENT SUBTOTALS						3,121,262.09	
						28.7%	
600	601-01522	guardrail, transition type tqb	2.000	EACH	1,978.24	3,956.48	
600	601-94689	guardrail end treatment, os	2.000	EACH	2,530.55	5,061.10	
600	601-99105	guardrail, w-beam, 6 ft 3 in spacing	2.100.000	L.F.	17.42	36,582.00	
600	603-06040	fence, farm field, 47 in	6,568.000	L.F.	5.50	36,124.00	
600	604-07569	pavers {pavers}	471.000	SYS	827.77	389,879.67	
600	605-06120	curb, concrete	620.000	L.F.	23.58	14,619.60	
600	605-06140	curb and gutter, concrete	3,921.000	L.F.	14.29	56,031.09	
600	605-06145	curb and gutter, b, concrete	961.000	L.F.	14.17	13,617.37	
600	605-06255	center curb, d, concrete	936.000	SYS	48.55	45,442.80	
600	610-09108	pccp for approaches, 9 in	300.000	SYS	57.06	17,118.00	
600	615-06510	monument, c	9.000	EACH	419.32	3,773.88	
600	615-06515	monument, d	27.000	EACH	141.25	3,813.75	

PRICING REPORTDate: 12/19/2012
Time: 14:45:08Project: **SR 37 Mobility Study - Greenfield Ave**
Location: **Greenfield Ave Interchange**
County: **HAMILTON**
District: **Crawfordsville**Project ID: **10-703 (6)**
Bid Date: **/ /** State: **IN**
Route: **SR 37**

Sect	Pay Item	Description	Quantity	Unit	Bid Price	Extension	Alt
600	616-02320	geotextiles	546.000	SYS	2.51	1,370.46	
600	616-06405	riprap, revetment	307.000	TON	29.36	9,013.52	
600	621-01004	mobilization and demobilization for seeding	4.000	EACH	382.61	1,530.44	
600	621-06545	fertilizer	6.000	TON	327.69	1,966.14	
600	621-06554	seed mixture, u	1,424.000	LBS	5.62	8,002.88	
600	621-06557	seed mixture, t	629.000	LBS	2.15	1,352.35	
600	621-06565	mulching material	26.000	TON	305.97	7,955.22	
600	621-06567	water	14.000	M.G.	3.74	52.36	
600	621-06574	sodding	3,495.000	SYS	3.12	10,904.40	
600	628-09403	field office, c	18.000	MONTH	2,082.44	37,483.92	
600	628-11068	cellular telephone/radio	2.000	EACH	150.38	300.76	
600	628-11069	cellular telephone/radio service, anytime minutes {cell phone}	36.000	MONTH	112.11	4,035.96	

INCIDENTAL CONSTRUCTION SUBTOTALS**709,988.15**
6.5%

700	701-90386	temporary sheet piling	1.000	L.S.	262,625.00	262,625.00	
700	706-08496	reinforced concrete moment slab, 12 in	1,258.000	SYS	87.86	110,527.88	
700	706-09545	coarse aggregate, no 8	315.000	C.Y.	61.00	19,215.00	
700	706-09959	railing, concrete, ft	5,693.000	L.F.	60.00	341,580.00	
700	715-05048	pipe, type 4 circular 6 in	16,125.000	L.F.	3.24	52,245.00	
700	715-05053	pipe, underdrain, outlet 6 in	378.000	L.F.	11.77	4,449.06	
700	715-05149	pipe, type 2 circular 12 in	4,710.000	L.F.	29.00	136,590.00	
700	715-06337	pipe extension, circular, 48 in	80.000	L.F.	170.00	13,600.00	
700	715-09064	video inspection for pipe	4,710.000	L.F.	1.48	6,970.80	
700	718-06528	outlet protector, 1	14.000	EACH	519.56	7,273.84	
700	718-06532	video inspection for underdrains	3,000.000	L.F.	0.94	2,820.00	
700	718-52610	aggregate for underdrains	1,452.000	C.Y.	32.72	47,509.44	
700	718-99153	geotextiles for underdrain	11,049.000	SYS	0.98	10,828.02	
700	720-07302	inlet, type ha. with slotted drain	12.000	EACH	2,444.15	29,329.80	
700	720-45030	inlet, e7	4.000	EACH	1,399.63	5,598.52	
700	720-45065	inlet, n12	5.000	EACH	2,978.77	14,893.85	
700	720-45410	manhole, c4	12.000	EACH	2,000.00	24,000.00	
700	720-98174	inlet, b15	12.000	EACH	2,189.87	26,278.44	
700	720-98555	inlet, c15	12.000	EACH	2,161.77	25,941.24	
700	731-93945	face panels, concrete	50,913.000	S.F.	11.99	610,446.87	
700	731-93946	wall erection	50,913.000	S.F.	5.56	283,076.28	
700	731-93947	leveling pad, concrete	3,323.000	L.F.	22.00	73,106.00	

STRUCTURES SUBTOTALS**2,108,905.04**
19.4%

800	801-01093	temporary worksite speed limit sign assembly	4.000	EACH	723.00	2,892.00	
800	801-03290	construction sign, c	4.000	EACH	199.19	796.76	
800	801-04308	road closure sign assembly	4.000	EACH	308.61	1,234.44	
800	801-06625	detour route marker assembly	18.000	EACH	98.84	1,779.12	
800	801-06640	construction sign, a	24.000	EACH	160.87	3,860.88	

PRICING REPORT

Date: 12/19/2012
Time: 14:45:09

Project: **SR 37 Mobility Study - Greenfield Ave**
Location: **Greenfield Ave Interchange**
County: **HAMILTON**
District: **Crawfordsville**

Project ID: **10-703 (6)**
Bid Date: **/ /** State: **IN**
Route: **SR 37**

Sect	Pay Item	Description	Quantity	Unit	Bid Price	Extension	Alt
800	801-06645	construction sign, b	4.000	EACH	58.33	233.32	
800	801-06710	flashing arrow sign	510.000	DAY	8.52	4,345.20	
800	801-06775	maintaining traffic	1.000	L.S.	194,479.75	194,479.75	
800	801-07024	energy absorbing terminal, cz, tl-3	1.000	EACH	7,316.67	7,316.67	
800	801-07118	barricade, iii-a	228.000	L.F.	13.17	3,002.76	
800	801-07119	barricade, iii-b	48.000	L.F.	14.08	675.84	
800	801-08400	temporary traffic barrier, type 1	3,009.000	L.F.	16.86	50,731.74	
800	801-08507	temporary traffic barrier, type 1, anchored	296.000	L.F.	34.09	10,090.64	
800	801-08508	temporary traffic barrier, type 2, anchored	3,009.000	L.F.	25.00	75,225.00	
800	801-09133	temporary changeable message sign	2.000	EACH	6,193.01	12,386.02	
800	801-52817	temporary crossover, b	2.000	EACH	25,000.00	50,000.00	
800	802-05701	sign post, square, type 1, reinforced anchor base	340.000	L.F.	12.95	4,403.00	
800	802-07057	sign, panel, with legend	429.000	S.F.	14.81	6,353.49	
800	802-07138	wide flange sign post support foundation, ix	2.000	EACH	242.00	484.00	
800	802-07159	cantilever sign support foundation, ii	2.000	EACH	3,349.33	6,698.66	
800	802-09840	sign, sheet, with legend 0.100 in thickness	115.000	S.F.	17.27	1,986.05	
800	802-76095	structural steel, breakaway	681.000	LBS	2.68	1,825.08	
800	802-76135	overhead sign structure, cantilever single arm	1.000	EACH	20,672.00	20,672.00	
800	804-06770	delineator post	14.000	EACH	43.14	603.96	
800	808-10031	line, multi-component, broken, white, 4 in	2,708.000	L.F.	0.43	1,164.44	
800	808-10033	line, multi-component, solid, white, 4 in	10,789.000	L.F.	0.46	4,962.94	
800	808-10034	line, multi-component, solid, yellow, 4 in	11,288.000	L.F.	0.46	5,192.48	
800	808-10037	line, multi-component, solid, white, 8 in	2,830.000	L.F.	1.04	2,943.20	
800	808-75071	pavement message marking, preformed plastic, lane indication arrow	8.000	EACH	187.00	1,496.00	
800	808-75510	transverse markings, preformed plastic, crosshatch line, white, 24 in	409.000	L.F.	12.09	4,944.81	
800	808-75998	snowplowable raised pavement marker	269.000	EACH	19.45	5,232.05	

TRAFFIC CONTROL DEVICES AND LIGHTING SUBTOTALS **488,012.30**
4.5%

TOTALS	10,890,866.22 100.0%
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BRIDGE ESTIMATE

JTB 11/26/12
JEC 11/26/12

PRICING REPORT

Date: 11/26/2012
Time: 15:22:36

Project: **Greenfield Ave over SR37 Revised - Concrete Bridge Option**
Location: **Hamilton County**
County: **HAMILTON**
District: **Greenfield**

Project ID: **10-703-GREENFIELD OV**
Bid Date: **/ /** State: **IN**
Route:

Pay Item	Description	Quantity	Unit	Bid Price	Extension	Alt
105-06845	construction engineering	1.000	L.S.	150,437.00	150,437.00	
110-01001	mobilization and demobilization	1.000	L.S.	250,729.00	250,729.00	
203-02020	excavation, unclassified	805.000	C.Y.	20.83	16,768.15	
211-02050	b borrow	805.000	C.Y.	27.42	22,073.10	
302-07455	dense graded subbase	584.000	C.Y.	62.94	36,756.96	
609-06259	reinforced concrete bridge approach 12 in	3,493.000	SYS	83.33	291,071.69	
701-06011	dynamic pile load test	3.000	EACH	1,651.34	4,954.02	
701-08122	pile, steel pipe, 0.375", 14	6,060.000	L.F.	42.87	259,792.20	
701-09559	test pile, dynamic, restrike	3.000	EACH	1,317.82	3,953.46	
701-09690	test pile, dynamic, 14 in non-production	210.000	L.F.	42.87	9,002.70	
702-51005	concrete, a, substructure	436.000	C.Y.	584.17	254,698.12	
702-51015	concrete, b, footings	299.000	C.Y.	307.53	91,951.47	
703-06028	reinforcing bars	89,570.000	LBS	0.91	81,508.70	
703-06029	reinforcing bars, epoxy coated	907,040.000	LBS	0.95	861,688.00	
704-51002	concrete, c, superstructure	3,248.000	C.Y.	560.34	1,819,984.32	
706-09959	railing, concrete, ft	397.000	L.F.	64.42	25,574.74	
707-07605	structural member, concrete bulb-t beam, 54 in x 48 in	4,925.000	L.F.	259.77	1,279,367.25	
709-51821	surface seal	1.000	L.S.	55,039.00	55,039.00	

TOTALS

5,515,349.88

ROAD QUANTITIES

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <u> <i>3/27/12</i> </u></u>	Checked By: <u> <i>BWC</i> <u> <i>11/24/12</i> </u></u>	
105-06845	CONSTRUCTION ENGINEERING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <u> <i>3/27/12</i> </u></u>	Checked By: <u> <i>BWC</i> <u> <i>11/24/12</i> </u></u>	
105-06845	CONSTRUCTION ENGINEERING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>3/27/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
105-06845	CONSTRUCTION ENGINEERING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <u> <i>3/27/12</i> </u></u>	Checked By: <u> <i>BWC</i> <u> <i>11/24/12</i> </u></u>	
105-06845	CONSTRUCTION ENGINEERING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>3/27/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
105-06845	CONSTRUCTION ENGINEERING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <u> <i>3/27/12</i> </u></u>	Checked By: <u> <i>BWC</i> <u> <i>11/24/12</i> </u></u>	
105-06845	CONSTRUCTION ENGINEERING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>3/27/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
105-06845	CONSTRUCTION ENGINEERING	1 LS

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 3/27/12

Checked By: BWC 11/24/12

110-01001

MOBILIZATION AND DEMOBILIZATION

1
LS

<i>TOTAL</i> =	<i>1.0</i>
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>3/27/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>3/27/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>3/27/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>3/27/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>3/27/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>3/27/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>3/27/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

[illegible]

					TOTAL =	1.0
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10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: srs 11/19/12

Checked By: BWS 11/24/12

202-02278

CURB, CONCRETE, REMOVE

531
LFT

<i>TOTAL =</i>	<i>531.0</i>
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<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i></u> Checked By: <u> <i>BWS</i> <i>11/24/12</i></u></p>		
202-02279	CURB AND GUTTER, REMOVE	2,160 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i></u> Checked By: <u> <i>BWS</i> <i>11/24/12</i></u></p>		
202-02279	CURB AND GUTTER, REMOVE	2,160 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i></u> Checked By: <u> <i>BWS</i> <i>11/24/12</i></u></p>		
202-02279	CURB AND GUTTER, REMOVE	2,160 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i></u> Checked By: <u> <i>BWS</i> <i>11/24/12</i></u></p>		
202-02279	CURB AND GUTTER, REMOVE	2,160 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i></u> Checked By: <u> <i>BWS</i> <i>11/24/12</i></u></p>		
202-02279	CURB AND GUTTER, REMOVE	2,160 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i></u> Checked By: <u> <i>BWS</i> <i>11/24/12</i></u></p>		
202-02279	CURB AND GUTTER, REMOVE	2,160 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p> <i>By:</i> <u> <i>srs</i> <i>11/19/12</i></u> <i>Checked By:</i> <u> <i>BWS</i> <i>11/24/12</i></u> </p>		
202-02279	CURB AND GUTTER, REMOVE	2,160 LFT

[illegible]

TOTAL = 2160.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
202-93999	SIGNAL POLE, REMOVE	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
202-93999	SIGNAL POLE, REMOVE	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
202-93999	SIGNAL POLE, REMOVE	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
202-93999	SIGNAL POLE, REMOVE	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
202-93999	SIGNAL POLE, REMOVE	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
202-93999	SIGNAL POLE, REMOVE	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
202-93999	SIGNAL POLE, REMOVE	4 EACH

[illegible][illegible]

10-703

SR 37 MOBILITY STUDY
GREENFIELD AVENUE

By: BWS 10/29/12

Checked By: srp 11/26/12

203-02000

EXCAVATION, COMMON

**93,000
CYS**

[illegible]

TOTAL = 93000.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>MAC</u> <u>5/10/12</u>	Checked By: <u>JPS</u> <u>11/21/12</u>	
205-06937	TEMPORARY SILT FENCE	500 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>MAC</u> <u>5/10/12</u>	Checked By: <u>JPS</u> <u>11/21/12</u>	
205-06937	TEMPORARY SILT FENCE	500 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>MAC</u> <u>5/10/12</u>	Checked By: <u>JPS</u> <u>11/21/12</u>	
205-06937	TEMPORARY SILT FENCE	500 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>MAC</u> <u>5/10/12</u>	Checked By: <u>JPS</u> <u>11/21/12</u>	
205-06937	TEMPORARY SILT FENCE	500 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>MAC</u> <u>5/10/12</u>	Checked By: <u>JPS</u> <u>11/21/12</u>	
205-06937	TEMPORARY SILT FENCE	500 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>MAC</u> <u>5/10/12</u>	Checked By: <u>JPS</u> <u>11/21/12</u>	
205-06937	TEMPORARY SILT FENCE	500 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>MAC</u> <u>5/10/12</u>	Checked By: <u>JPS</u> <u>11/21/12</u>	
205-06937	TEMPORARY SILT FENCE	500 LFT

[illegible]

TOTAL = 500.0

SUBTOTAL (THIS PAGE) =		46085.8
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10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: SRS 5/15/12Checked By: ATW 11/24/12

207-08263

SUBGRADE TREATMENT, TYPE IA

SYS

Begin Station	End Station	Side	Begin Width	End Width	Area (sft)	Area (sys)
Ramp "GRN_NW"						
20+10.08	23+22.83	Lt	4.00	4.00	1251.00	139.0
23+22.83	24+23.08	Lt	4.00	4.00	401.00	44.6
24+23.08	24+79.08	Lt	4.00	4.00	224.00	24.9
24+79.08	26+08.60	Lt	4.00	4.00	518.08	57.6
Add Extra 2' where there is curb on ramp						
25+00.27	26+08.60	Lt	2.00	2.00	216.66	24.1
25+26.59	26+08.60	Rt	2.00	2.00	164.02	18.2
Ramp "GRN_NE"						
10+00.00	11+84.07	Rt	4.00	4.00	736.28	81.8
11+84.07	16+09.45	Rt	4.00	4.00	1701.52	189.1
Add Extra 2' where there is curb on ramp						
10+00.00	11+22.49	Lt	2.00	2.00	244.98	27.2
10+00.00	11+75.18	Rt	2.00	2.00	350.36	38.9
Roundabout						
Outside area	subtract inside area					
63536.86	16003.63				47533.23	5281.5
Line "S-I-A"						
60+00.00	63+55.89	Rt.	4.00	4.00	1423.56	158.2
69+64.89	72+68.37	Rt.	4.00	4.00	1213.92	134.9
60+00.00	61+00.00	Lt.	4.00	4.00	400.00	44.4
61+00.00	63+18.19	Lt.	4.00	4.00	872.76	97.0
69+46.79	70+31.09	Lt.	4.00	4.00	337.20	37.5
70+31.09	71+32.95	Lt.	4.00	4.00	407.44	45.3
71+32.95	72+68.37	Lt.	4.00	4.00	541.68	60.2
Subtract from bridge area:					6046.99	-671.9
Subtract pavement from moment slab						
NE Wall						
NO Wall						
SE Wall						
NO Wall						
SW Wall					4415.29	-490.6
NW Wall					4607.02	-511.9

SUBTOTAL (THIS PAGE) = 4829.8

TOTAL = 50915.6

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

Checked By: BWS 11/24/12

**300
SYS**

[illegible]

TOTAL =	299.3
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>SRS</i> <i>11/16/12</i></u>	Checked By: <u> <i>srp</i> <i>11/26/12</i></u>	
211-09194	B BORROW	32,693 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>SRS</i> <i>11/16/12</i></u>	Checked By: <u> <i>srp</i> <i>11/26/12</i></u>	
211-09194	B BORROW	32,693 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>SRS</i> </u>	<u> <i>11/16/12</i> </u>	Checked By: <u> <i>srp</i> </u>
211-09194	B BORROW	32,693 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>SRS</i> </u>	<u> <i>11/16/12</i> </u>	Checked By: <u> <i>srp</i> </u>
211-09194	B BORROW	32,693 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>SRS</i> <i>11/16/12</i></u>	Checked By: <u> <i>srp</i> <i>11/26/12</i></u>	
211-09194	B BORROW	32,693 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>SRS</i> <i>11/16/12</i></u>	Checked By: <u> <i>srp</i> <i>11/26/12</i></u>	
211-09194	B BORROW	32,693 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>SRS</i> <i>11/16/12</i></u>	Checked By: <u> <i>srp</i> <i>11/26/12</i></u>	
211-09194	B BORROW	32,693 TON

[illegible]

<i>TOTAL =</i>		32692.4
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**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

Checked By: srp 11/26/12

728
CYS[illegible]

TOTAL this page = 727.4

<i>TOTAL this page =</i>		1493.2
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***TOTAL* = 23468.8**

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	3,683 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	3,683 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	3,683 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	3,683 TON

<div>10-703</div> <div>SR 37 MOBILITY STUDY GREENFIELD AVENUE</div> <div>By: <u>BWS</u> <u>4/26/12</u> Checked By: <u>BWC</u> <u>11/24/12</u></div> <div>301-07448 COMPACTED AGGREGATE, NO. 53, BASE 3,683 TON</div>		
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<div>10-703</div> <div>SR 37 MOBILITY STUDY GREENFIELD AVENUE</div> <div>By: <u>BWS</u> <u>4/26/12</u> Checked By: <u>BWC</u> <u>11/24/12</u></div> <div>301-07448 COMPACTED AGGREGATE, NO. 53, BASE 3,683 TON</div>		
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<div>10-703</div>		
<div>SR 37 MOBILITY STUDY GREENFIELD AVENUE</div>		
By: <u>BWS</u>	<u>4/26/12</u>	Checked By: <u>BWC</u>
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	3,683 TON

TOTAL = 3682.6

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: SRS 5/17/12Checked By: ATW 11/24/12

302-06464

SUBBASE FOR PCCP

12,729
CYS

Begin Station	End Station	Side	Begin Width	End Width	Area (sft)	Depth (ft)	Volume (cys)
Pavement Area copied from 501-06323 multiplied by 9:					379386.7392	0.75	10538.5
Outside Area (2' on either side):							
Line "A"							
201+50.00	201+98.97	Rt	4.00	4.00	195.88	0.75	5.4
201+98.97	202+98.97	Rt	4.00	4.00	400.00	0.75	11.1
202+98.97	207+60.67	Rt	4.00	4.00	1846.80	0.75	51.3
207+60.67	212+98.39	Rt	4.00	4.00	2150.88	0.75	59.7
212+98.39	226+33.55	Rt	4.00	4.00	5340.64	0.75	148.4
226+33.55	229+30.72	Rt	4.00	4.00	1188.68	0.75	33.0
229+30.72	235+33.72	Rt	4.00	4.00	2412.00	0.75	67.0
235+33.72	238+33.71	Rt	4.00	4.00	1199.96	0.75	33.3
201+50.00	202+84.01	Lt	4.00	4.00	536.04	0.75	14.9
202+84.01	205+84.02	Lt	4.00	4.00	1200.04	0.75	33.3
205+84.02	211+86.95	Lt	4.00	4.00	2411.72	0.75	67.0
211+86.95	214+83.69	Lt	4.00	4.00	1186.96	0.75	33.0
214+83.69	228+21.90	Lt	4.00	4.00	5352.84	0.75	148.7
228+21.90	233+59.87	Lt	4.00	4.00	2151.88	0.75	59.8
233+59.87	238+33.71	Lt	4.00	4.00	1895.36	0.75	52.6
Ramp "GRN_SE"							
10+00.00	13+58.05	Rt	4.00	4.00	1432.20	0.75	39.8
13+58.05	14+57.80	Rt	4.00	4.00	399.00	0.75	11.1
14+57.80	16+08.33	Rt	4.00	4.00	602.12	0.75	16.7
Add Extra 2' where there is curb on ramp							
14+76.76	16+08.34	Lt	2.00	2.00	263.16	0.75	7.3
15+10.52	16+08.34	Rt	2.00	2.00	195.64	0.75	5.4
Ramp "GRN_SW"							
10+00.00	11+92.71	Lt	4.00	4.00	770.84	0.75	21.4
11+92.71	15+99.78	Lt	4.00	4.00	1628.28	0.75	45.2
Add Extra 2' where there is curb on ramp							
10+00.00	11+83.16	Lt	2.00	2.00	366.32	0.75	10.2
10+00.00	11+29.18	Rt	2.00	2.00	258.36	0.75	7.2
SUBTOTAL (THIS PAGE) =							11521.5

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: SRS 5/17/12Checked By: ATW 11/24/12

302-06464

SUBBASE FOR PCCP

CYS

Begin Station	End Station	Side	Begin Width	End Width	Area (sft)	Depth (ft)	Volume (cys)
Ramp "GRN_NW"							
20+10.08	23+22.83	Lt	4.00	4.00	1251.00	0.75	34.8
23+22.83	24+23.08	Lt	4.00	4.00	401.00	0.75	11.1
24+23.08	24+79.08	Lt	4.00	4.00	224.00	0.75	6.2
24+79.08	26+08.60	Lt	4.00	4.00	518.08	0.75	14.4
Add Extra 2' where there is curb on ramp							
25+00.27	26+08.60	Lt	2.00	2.00	216.66	0.75	6.0
25+26.59	26+08.60	Rt	2.00	2.00	164.02	0.75	4.6
Ramp "GRN_NE"							
10+00.00	11+84.07	Rt	4.00	4.00	736.28	0.75	20.5
11+84.07	16+09.45	Rt	4.00	4.00	1701.52	0.75	47.3
Add Extra 2' where there is curb on ramp							
10+00.00	11+22.49	Lt	2.00	2.00	244.98	0.75	6.8
10+00.00	11+75.18	Rt	2.00	2.00	350.36	0.75	9.7
Roundabout							
Outside area	subtract inside area						
63536.86	16003.63				47533.23	0.75	1320.4
Line "S-I-A"							
60+00.00	63+55.89	Rt.	4.00	4.00	1423.56	0.75	39.5
69+64.89	72+68.37	Rt.	4.00	4.00	1213.92	0.75	33.7
60+00.00	61+00.00	Lt.	4.00	4.00	400.00	0.75	11.1
61+00.00	63+18.19	Lt.	4.00	4.00	872.76	0.75	24.2
69+46.79	70+31.09	Lt.	4.00	4.00	337.20	0.75	9.4
70+31.09	71+32.95	Lt.	4.00	4.00	407.44	0.75	11.3
71+32.95	72+68.37	Lt.	4.00	4.00	541.68	0.75	15.0
Subtract from bridge area:							
Subtract pavement from moment slab					6046.99	0.75	-168.0
NE Wall							
NO Wall							
SE Wall							
NO Wall							
SW Wall							
					4415.29	0.75	-122.6
NW Wall							
					4607.02	0.75	-128.0

SUBTOTAL (THIS PAGE) = 1207.5

TOTAL = 12728.9

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: SRS 11/18/12Checked By: ATW 11/24/12

303-01180

COMPACTED AGGREGATE, NO. 53

2,582
TON

<i>Begin Station</i>	<i>End Station</i>		<i>Area (sft)</i>	<i>Volume</i>	<i>Factor</i>	<i>Tons</i>
				(cys)	(T/cys)	
Line "A"						
201+50.00	201+98.97	Rt	5.4	9.79	2.000	19.59
201+98.97	202+98.97	Rt	5.4	20.00	2.000	40.00
202+98.97	207+60.67	Rt	5.4	92.34	2.000	184.68
207+60.67	212+98.39	Rt	5.4	107.54	2.000	215.09
226+33.55	229+30.72	Rt	5.4	59.43	2.000	118.87
229+30.72	235+33.72	Rt	5.4	120.60	2.000	241.20
235+33.72	238+33.71	Rt	5.4	60.00	2.000	120.00
201+50.00	202+84.01	Lt	5.4	26.80	2.000	53.60
202+84.01	205+84.02	Lt	5.4	60.00	2.000	120.00
205+84.02	211+86.95	Lt	5.4	120.59	2.000	241.17
211+86.95	214+83.69	Lt	5.4	59.35	2.000	118.70
228+21.90	233+59.87	Lt	5.4	107.59	2.000	215.19
233+59.87	238+33.71	Lt	5.4	94.77	2.000	189.54
Ramp "GRN_SE"						
10+00.00	13+58.05	Rt	5.4	71.61	2.000	143.22
13+58.05	14+57.80	Rt	5.4	19.95	2.000	39.90
Ramp "GRN_SW"						
11+92.71	15+99.78	Lt	5.4	81.41	2.000	162.83
Ramp "GRN_NW"						
20+10.08	23+22.83	Lt	5.4	62.55	2.000	125.10
23+22.83	24+23.08	Lt	5.4	20.05	2.000	40.10
24+23.08	24+79.08	Lt	5.4	11.20	2.000	22.40
Ramp "GRN_NE"						
11+84.07	16+09.45	Rt	5.4	85.08	2.000	170.15

TOTAL = 2581.3

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: ATW 11/24/12

Checked By: BWS 11/25/12

306-08034

MILLING, ASPHALT, 1 1/2 IN

**11,313
SYS**

[illegible]

TOTAL =	11313.0
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>ATW</u> <u>11/24/12</u>	Checked By: <u>BWS</u> <u>11/25/12</u>	
401-07328	QC/QA-HMA, 3, 70, SURFACE, 9.5 mm	934 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>ATW</u>	<u>11/24/12</u>	Checked By: <u>BWS</u> <u>11/25/12</u>
401-07328	QC/QA-HMA, 3, 70, SURFACE, 9.5 mm	934 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>ATW</u>	<u>11/24/12</u>	Checked By: <u>BWS</u> <u>11/25/12</u>
401-07328	QC/QA-HMA, 3, 70, SURFACE, 9.5 mm	934 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>ATW</u>	<u>11/24/12</u>	Checked By: <u>BWS</u> <u>11/25/12</u>
401-07328	QC/QA-HMA, 3, 70, SURFACE, 9.5 mm	934 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>ATW</u>	<u>11/24/12</u>	Checked By: <u>BWS</u> <u>11/25/12</u>
401-07328	QC/QA-HMA, 3, 70, SURFACE, 9.5 mm	934 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>ATW</u>	<u>11/24/12</u>	Checked By: <u>BWS</u> <u>11/25/12</u>
401-07328	QC/QA-HMA, 3, 70, SURFACE, 9.5 mm	934 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>ATW</u>	<u>11/24/12</u>	Checked By: <u>BWS</u> <u>11/25/12</u>
401-07328	QC/QA-HMA, 3, 70, SURFACE, 9.5 mm	934 TON

[illegible]

	<i>TOTAL</i> =	933.4
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
402-10084	HMA FOR TEMPORARY PAVEMENT, B	5,469 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
402-10084	HMA FOR TEMPORARY PAVEMENT, B	5,469 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
402-10084	HMA FOR TEMPORARY PAVEMENT, B	5,469 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
402-10084	HMA FOR TEMPORARY PAVEMENT, B	5,469 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
402-10084	HMA FOR TEMPORARY PAVEMENT, B	5,469 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
402-10084	HMA FOR TEMPORARY PAVEMENT, B	5,469 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
402-10084	HMA FOR TEMPORARY PAVEMENT, B	5,469 TON

[illegible]

		<i>SUBTOTAL (THIS PAGE) =</i>		<i>5468.7</i>
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TOTAL = 5468.7

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		<i>1.0</i>
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TOTAL = 1.0

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: SRS 5/15/12Checked By: ATW 11/24/12**501-06323****QC/QA-PCCP, 12 IN****42,155
SYS**

<i>Begin Station</i>	<i>End Station</i>	<i>Side</i>	<i>Begin Width</i>	<i>End Width</i>	<i>Area (sft)</i>	<i>Area (sys)</i>
Line "A"						
201+50.00	201+98.97	Rt	38.00	38.00	1860.86	207
201+98.97	202+98.97	Rt	38.00	50.00	4400.00	489
202+98.97	207+60.67	Rt	50.00	50.00	23085.00	2565
207+60.67	212+98.39	Rt	50.00	69.50	32128.77	3570
212+98.39	226+33.55	Rt	43.50	43.50	58079.46	6453
226+33.55	229+30.72	Rt	69.50	50.00	17755.91	1973
229+30.72	235+33.72	Rt	50.00	50.00	30150.00	3350
235+33.72	238+33.71	Rt	50.00	50.00	14999.50	1667
201+50.00	202+84.01	Lt	38.00	38.00	5092.38	566
202+84.01	205+84.02	Lt	38.00	50.00	13200.44	1467
205+84.02	211+86.95	Lt	50.00	50.00	30146.50	3350
211+86.95	214+83.13	Lt	50.00	69.50	17696.76	1966
214+83.13	228+21.90	Lt	43.50	43.50	58236.50	6471
228+21.90	233+59.87	Lt	69.50	50.00	32143.71	3572
233+59.87	238+33.71	Lt	50.00	50.00	23692.00	2632
Ramp "GRN_SE"						
10+00.00	13+58.05	Rt	26.00	26.00	9309.30	1034
13+58.05	14+76.75	Rt	26.00	38.00	3798.40	422
14+76.75	15+10.51	Rt	32.00	27.47	1003.85	112
15+10.51	16+08.32	Rt	27.47	32.37	2926.48	325
Ramp "GRN_SW"						
20+00.00	21+32.31	Lt	17.15	13.47	2025.67	225
21+32.31	21+83.15	Lt	13.47	20.00	850.81	95
21+83.15	25+99.78	Lt	26.00	26.00	10832.38	1204
Ramp "GRN_NW"						
40+00.00	43+12.75	Lt	26.00	26.00	8131.50	904
43+12.75	44+13.00	Lt	26.00	38.00	3208.00	356
44+13.00	44+90.19	Lt	38.00	38.00	2933.22	326
44+90.19	45+13.88	Lt	32.00	27.93	709.87	79
45+13.88	45+98.51	Lt	27.93	47.18	3178.28	353
Ramp "GRN_NE"						
30+00.00	31+25.53	Rt	17.09	13.43	1915.59	213
31+25.53	31+75.17	Rt	13.43	20.00	829.73	92
31+75.17	36+09.44	Rt	26.00	26.00	11291.02	1255
Roundabout						
Outside area	subtract inside area					
56094.32	16003.63				40090.69	4455

SUBTOTAL (THIS PAGE) = 51744.7

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: SRS 5/15/12Checked By: ATW 11/24/12

501-06323

QC/QA-PCCP, 12 IN

SYS

<i>Begin Station</i>	<i>End Station</i>	<i>Side</i>	<i>Begin Width</i>	<i>End Width</i>	<i>Area (sft)</i>	<i>Area (sys)</i>
<i>Line "S-I-A"</i>						
60+00.00	60+85.04	Rt.	11.20	20.45	1345.76	150
60+85.04	61+36.94	Rt.	16.45	22.10	1000.37	111
61+36.94	62+39.35	Rt.	22.10	24.00	2360.55	262
62+39.35	63+55.89	Rt.	24.00	24.00	2796.96	311
69+64.89	71+68.37	Rt.	24.00	24.00	4883.52	543
71+68.37	72+68.37	Rt.	24.00	36.00	3000.00	333
60+00.00	60+85.04	Lt.	16.00	28.00	1870.88	208
60+85.04	63+18.19	Lt.	24.00	24.00	5595.60	622
69+46.79	72+68.37	Lt.	24.00	24.00	7717.92	858
<i>Subtract pavement from moment slab</i>						
<i>NE Wall</i>	<i>NO Wall</i>					
<i>SE Wall</i>	<i>NO Wall</i>					
<i>SW Wall</i>					4415.29	-491
<i>NW Wall</i>					4607.02	-512
<i>Subtract from bridge area:</i>						
					6046.99	-672
<i>Resurfacing "A" (Subtract from Mainline)</i>						
201+50.00	212+95.00	Rt	24.00	24.00	27480.00	-3053
228+57.50	238+33.71	Rt	24.00	24.00	23429.04	-2603
201+50.00	212+95.00	Lt	24.00	24.00	27480.00	-3053
228+57.50	238+33.71	Lt	24.00	24.00	23429.04	-2603

SUBTOTAL (THIS PAGE) = -9590.6

TOTAL = 42154.1

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
503-05240	D-1 CONTRACTION JOINT	21,078 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
503-05240	D-1 CONTRACTION JOINT	21,078 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
503-05240	D-1 CONTRACTION JOINT	21,078 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
503-05240	D-1 CONTRACTION JOINT	21,078 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
503-05240	D-1 CONTRACTION JOINT	21,078 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
503-05240	D-1 CONTRACTION JOINT	21,078 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
<i>By:</i> <u> <i>srs</i> <i>11/19/12</i></u>	<i>Checked By:</i> <u> <i>ATW</i> <i>11/24/12</i></u>	
503-05240	D-1 CONTRACTION JOINT	21,078 LFT

[illegible]

<i>TOTAL =</i>		<i>21077.5</i>
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10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: SRS 11/24/12

Checked By: BWS 11/25/12

601-01522

GUARDRAIL, TRANSITION TYPE TGB

2
EACH

[illegible]

<i>TOTAL =</i>	<i>2.0</i>
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10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: SRS 11/24/12

Checked By: BWS 11/25/12

601-94689

GUARDRAIL END TREATMENT, OS

2
EACH

[illegible]

<i>TOTAL =</i>	<i>2.0</i>
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/20/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
603-06040	FENCE, FARM FIELD, 47 IN	6,568 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/20/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
603-06040	FENCE, FARM FIELD, 47 IN	6,568 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/20/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
603-06040	FENCE, FARM FIELD, 47 IN	6,568 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/20/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
603-06040	FENCE, FARM FIELD, 47 IN	6,568 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/20/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
603-06040	FENCE, FARM FIELD, 47 IN	6,568 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/20/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
603-06040	FENCE, FARM FIELD, 47 IN	6,568 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/20/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
603-06040	FENCE, FARM FIELD, 47 IN	6,568 LFT

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		<i>6567.4</i>
<i>TOTAL =</i>		<i>6567.4</i>

TOTAL = 6567.4

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: JPS 11/21/12

Checked By: BWS 11/24/12

604-07569

PAVERS

471
SYS[illegible]

SUBTOTAL (THIS PAGE) =		470.5
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TOTAL = 470.5

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
605-06120	CURB, CONCRETE	620 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>JPS</i> <i>11/21/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
605-06120	CURB, CONCRETE	620 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>JPS</i> <i>11/21/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
605-06120	CURB, CONCRETE	620 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>JPS</i> <i>11/21/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
605-06120	CURB, CONCRETE	620 LFT

10-703		
SR 37 MOBILITY STUDY GREENFIELD AVENUE		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06120	CURB, CONCRETE	620 LFT

10-703		
SR 37 MOBILITY STUDY GREENFIELD AVENUE		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06120	CURB, CONCRETE	620 LFT

10-703		
SR 37 MOBILITY STUDY GREENFIELD AVENUE		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06120	CURB, CONCRETE	620 LFT

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		<i>620.0</i>
<i>TOTAL =</i>		<i>620.0</i>

<i>TOTAL</i> =	620.0
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10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: srs 11/19/12

Checked By: BWS 11/24/12

605-06140

CURB AND GUTTER, CONCRETE

**3,921
LFT**

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		3920.4
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TOTAL = 3920.4

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
605-06145	CURB AND GUTTER, B, CONCRETE	961 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>JPS</i> <i>11/21/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
605-06145	CURB AND GUTTER, B, CONCRETE	961 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
605-06145	CURB AND GUTTER, B, CONCRETE	961 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
605-06145	CURB AND GUTTER, B, CONCRETE	961 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
605-06145	CURB AND GUTTER, B, CONCRETE	961 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
605-06145	CURB AND GUTTER, B, CONCRETE	961 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
605-06145	CURB AND GUTTER, B, CONCRETE	961 LFT

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		<i>960.5</i>
<i>TOTAL =</i>		<i>960.5</i>

TOTAL = 960.5

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	936 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	936 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	936 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	936 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>JPS</i> 11/21/12 </u>	
605-06255	CENTER CURB, D, CONCRETE	936 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	936 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	936 SYS

[illegible]

<i>TOTAL =</i>		<i>935.2</i>
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**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

Checked By: BWS 11/24/12

**300
SYS**

[illegible]

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 11/20/12Checked By: BWC 11/24/12

615-06510

MONUMENT, C

**9
EACH**

<i>Alignment</i>	<i>Station</i>	<i>Description</i>	<i>Inside Pavement?</i>			<i>Each</i>
Line "S-I-A"						
	60+00.00	Begin Project		Yes		
	61+68.95	PC		Yes		
	62+69.89	PI		Yes		
	63+70.77	PT		Yes		
	63+71.07	PC		Yes		
	64+95.66	PI		Yes		
	66+20.10	PT		Yes		
	66+29.08	PC		Yes		
	68+29.60	PI		Yes		
	70+29.98	PT		Yes		
	72+68.37	End Project		Yes		
Line "A"						
	201+50.00	Begin Project		No		1
	210+00.00	Between BP and PI		No		1
	219+44.97	PI		No		1
	229+00.00	Between PI and EP		No		1
	238+33.71	End Project, PCC		No		1
SW Ramp						
	20+00.00	Begin Project, PC		Yes		
	20+94.53	PI		No		1
	21+83.15	PCC		Yes		
	26+00.00	PI		Yes		
	26+00.00	End Project		Yes		
NW Ramp	40+00.00	Begin Project		Yes		
	42+45.15	PI		Yes		
	44+90.19	PCC		Yes		
	45+46.84	PI		No		1
	45+98.51	End Project, PT		Yes		
NE Ramp	30+00.00	Begin Project, PC		Yes		
	30+90.16	PI		No		1
	31+75.17	PCC		Yes		
	33+92.34	PI		Yes		
	36+09.44	End Project		Yes		
SE Ramp	10+00.00	Begin Project		Yes		
	12+38.43	PI		Yes		
	14+76.75	PCC		Yes		
	15+45.02	PI		No		1
	16+08.32	End Project, PT		Yes		

SUBTOTAL (THIS PAGE) = 9.0

TOTAL = 9.0

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 10/20/12Checked By: BWC 11/24/12**615-06515****MONUMENT, D****27
EACH**

<i>Alignment</i>	<i>Station</i>	<i>Description</i>	<i>Inside Pavement?</i>			<i>Each</i>
Line "S-I-A"						
	60+00.00	Begin Project		Yes		1
	61+68.95	PC		Yes		1
	62+69.89	PI		Yes		1
	63+70.77	PT		Yes		1
	63+71.07	PC		Yes		1
	64+95.66	PI		Yes		1
	66+20.10	PT		Yes		1
	66+29.08	PC		Yes		1
	68+29.60	PI		Yes		1
	70+29.98	PT		Yes		1
	72+68.37	End Project		Yes		1
Line "A"						
	201+50.00	Begin Project		No		
	210+00.00	Between BP and PI		No		
	219+44.97	PI		No		
	229+00.00	Between PI and EP		No		
	238+33.71	End Project, PCC		No		
SW Ramp						
	20+00.00	Begin Project, PC		Yes		1
	20+94.53	PI		No		
	21+83.15	PCC		Yes		1
	26+00.00	PI		Yes		1
	26+00.00	End Project		Yes		1
NW Ramp	40+00.00	Begin Project		Yes		1
	42+45.15	PI		Yes		1
	44+90.19	PCC		Yes		1
	45+46.84	PI		No		
	45+98.51	End Project, PT		Yes		1
NE Ramp	30+00.00	Begin Project, PC		Yes		1
	30+90.16	PI		No		
	31+75.17	PCC		Yes		1
	33+92.34	PI		Yes		1
	36+09.44	End Project		Yes		1
SE Ramp	10+00.00	Begin Project		Yes		1
	12+38.43	PI		Yes		1
	14+76.75	PCC		Yes		1
	15+45.02	PI		No		
	16+08.32	End Project, PT		Yes		1

SUBTOTAL (THIS PAGE) = 27.0

TOTAL = 27.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
616-02320	GEOTEXTILES	546 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> </u>	<u> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> </u>
616-02320	GEOTEXTILES	546 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> </u>	<u> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> </u>
616-02320	GEOTEXTILES	546 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
616-02320	GEOTEXTILES	546 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
616-02320	GEOTEXTILES	546 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
616-02320	GEOTEXTILES	546 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
616-02320	GEOTEXTILES	546 SYS

[illegible]

	<i>TOTAL =</i>	545.2
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/11/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
616-06405	RIPRAP, REVETMENT	307 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/11/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
616-06405	RIPRAP, REVETMENT	307 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/11/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
616-06405	RIPRAP, REVETMENT	307 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/11/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
616-06405	RIPRAP, REVETMENT	307 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/11/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
616-06405	RIPRAP, REVETMENT	307 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/11/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
616-06405	RIPRAP, REVETMENT	307 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/11/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
616-06405	RIPRAP, REVETMENT	307 TON

[illegible]

	<i>TOTAL =</i>	307.0
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
<i>By:</i>	<u><i>DJZ</i></u>	<i>4/25/12</i>
		<i>Checked By:</i>
		<u><i>BWS</i></u>
		<i>11/24/12</i>
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
<i>By:</i>	<u><i>DJZ</i></u>	<i>4/25/12</i>
		<i>Checked By:</i>
		<u><i>BWS</i></u>
		<i>11/24/12</i>
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
<i>By:</i>	<u><i>DJZ</i></u>	<i>4/25/12</i>
		<i>Checked By:</i>
		<u><i>BWS</i></u>
		<i>11/24/12</i>
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
<i>By:</i>	<u><i>DJZ</i></u>	<i>4/25/12</i>
		<i>Checked By:</i>
		<u><i>BWS</i></u>
		<i>11/24/12</i>
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
<i>By:</i>	<u><i>DJZ</i></u>	<i>4/25/12</i>
		<i>Checked By:</i>
		<u><i>BWS</i></u>
		<i>11/24/12</i>
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

[illegible]

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> </u>	<u> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> </u>
621-06545	FERTILIZER	6 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> </u>	<u> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> </u>
621-06545	FERTILIZER	6 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> </u>	<u> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> </u>
621-06545	FERTILIZER	6 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> </u>	<u> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> </u>
621-06545	FERTILIZER	6 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06545	FERTILIZER	6 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> </u>	<u> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> </u>
621-06545	FERTILIZER	6 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> </u>	<u> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> </u>
621-06545	FERTILIZER	6 TON

[illegible]

		<i>TOTAL =</i>		<i>5.0</i>
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u>DJZ</u> <u>4/25/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
621-06554	SEED MIXTURE, U	1,424 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,424 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,424 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,424 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,424 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,424 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,424 LBS

[illegible]

		TOTAL =	1423.7
--	--	---------	--------

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	629 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	629 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	629 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	629 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	629 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	629 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	629 LBS

[illegible]

	<i>TOTAL =</i>	628.1
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10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: DJZ 4/25/12

Checked By: BWS 11/24/12

621-06565

MULCHING MATERIAL

26
TON

[illegible]

<i>TOTAL</i> =	25.1
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10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: DJZ 4/25/12

Checked By: BWS 11/24/12

621-06567

WATER

14
kGAL

[illegible]

<i>TOTAL</i> =	<i>14.0</i>
-----------------------	--------------------

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: DJZ 4/25/12

Checked By: BWS 11/24/12

621-06574

SODDING

**3,495
SYS**

[illegible]

<i>TOTAL</i> =	3494.2
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

[illegible]

<i>SUBTOTAL (THIS PAGE) = 2.0</i>	
--	--

TOTAL = 2.0

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: srs 11/19/12

Checked By: BWS 11/24/12

628-08521

CELLULAR TELEPHONE/RADIO SERVICE

36
MOS

[illegible]

SUBTOTAL (THIS PAGE) =		36.0
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TOTAL = 36.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-09403	FIELD OFFICE, C	18 MOS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-09403	FIELD OFFICE, C	18 MOS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-09403	FIELD OFFICE, C	18 MOS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-09403	FIELD OFFICE, C	18 MOS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-09403	FIELD OFFICE, C	18 MOS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-09403	FIELD OFFICE, C	18 MOS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-09403	FIELD OFFICE, C	18 MOS

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		<i>18.0</i>
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TOTAL = *18.0*

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
701-90386	TEMPORARY SHEET PILING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
701-90386	TEMPORARY SHEET PILING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
701-90386	TEMPORARY SHEET PILING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
701-90386	TEMPORARY SHEET PILING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
701-90386	TEMPORARY SHEET PILING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
701-90386	TEMPORARY SHEET PILING	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
701-90386	TEMPORARY SHEET PILING	1 LS

[illegible]

TOTAL = 1.0

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i></u> Checked By: <u> <i>ATW</i> <i>11/24/12</i></u></p>		
706-08496	REINFORCED CONCRETE MOMENT SLAB, 12 IN	1,258 SYS

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>ATW</i> <i>11/24/12</i> </u></p>		
706-08496	REINFORCED CONCRETE MOMENT SLAB, 12 IN	1,258 SYS

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>ATW</i> <i>11/24/12</i> </u></p>		
706-08496	REINFORCED CONCRETE MOMENT SLAB, 12 IN	1,258 SYS

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>ATW</i> <i>11/24/12</i> </u></p>		
706-08496	REINFORCED CONCRETE MOMENT SLAB, 12 IN	1,258 SYS

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>ATW</i> <i>11/24/12</i> </u></p>		
706-08496	REINFORCED CONCRETE MOMENT SLAB, 12 IN	1,258 SYS

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>ATW</i> <i>11/24/12</i> </u></p>		
706-08496	REINFORCED CONCRETE MOMENT SLAB, 12 IN	1,258 SYS

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY</i> <i>GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i></u> Checked By: <u> <i>ATW</i> <i>11/24/12</i></u></p>		
706-08496	REINFORCED CONCRETE MOMENT SLAB, 12 IN	1,258 SYS

[illegible]

<i>TOTAL =</i>		<i>1257.3</i>
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
706-09545	COARSE AGGREGATE, NO 8	315 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i> </u>	
706-09545	COARSE AGGREGATE, NO 8	315 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
706-09545	COARSE AGGREGATE, NO 8	315 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i> </u>	
706-09545	COARSE AGGREGATE, NO 8	315 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
706-09545	COARSE AGGREGATE, NO 8	315 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
706-09545	COARSE AGGREGATE, NO 8	315 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
706-09545	COARSE AGGREGATE, NO 8	315 CYS

[illegible]

		<i>SUBTOTAL (THIS PAGE) =</i>		<i>314.3</i>
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TOTAL = 314.3

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: srs 11/24/12

Checked By: BWS 11/25/12

706-09959

RAILING, CONCRETE, FT

**5,693
LFT**

[illegible]

SUBTOTAL (THIS PAGE) =		5692.3
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TOTAL = 5692.3

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	16,125 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	16,125 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u></p>		
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	16,125 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	16,125 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	16,125 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	16,125 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	16,125 LFT

[illegible]

	<i>TOTAL =</i>	16124.6
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TOTAL = *16124.6*

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
715-05053	PIPE, UNDERDRAIN, OUTLET 6 IN	378 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
715-05053	PIPE, UNDERDRAIN, OUTLET 6 IN	378 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
715-05053	PIPE, UNDERDRAIN, OUTLET 6 IN	378 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
715-05053	PIPE, UNDERDRAIN, OUTLET 6 IN	378 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
715-05053	PIPE, UNDERDRAIN, OUTLET 6 IN	378 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
715-05053	PIPE, UNDERDRAIN, OUTLET 6 IN	378 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
715-05053	PIPE, UNDERDRAIN, OUTLET 6 IN	378 LFT

[illegible]

	<i>TOTAL =</i>	378.0
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TOTAL = *378.0*

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 11/19/12Checked By: BWC 11/24/12**715-05149****PIPE, TYPE 2 CIRCULAR 12 IN****4,710
LFT**

<i>Station</i>						<i>Lft</i>
<i>Use 300' inlet spacing</i>						
<i>Line "A"</i>	<i>Median Inlets</i>					
						87
						87
						99
						303
						273
						60
						139
						68
						66
						154
						59
						166
						183
						64
						99
						87
<i>Line "A"</i>	<i>Outside Wall Inlets</i>					
	<i>Rt</i>					36
	<i>Lt</i>					38
	<i>Rt</i>					58
	<i>Rt</i>					43
	<i>Lt</i>					38
	<i>Rt</i>					59
<i>Line "S-1-A"</i>						
60+50.00						157
61+50.00						182
62+70.00						151
63+50.00						173
64+50.00						556
68+50.00						651
69+50.00						172
70+50.00						167
71+50.00						167
72+50.00						67

SUBTOTAL (THIS PAGE) = 4710.0

TOTAL = 4710.0

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: srs 11/21/12

Checked By: BWS 11/24/12

715-06337

PIPE EXTENSION, CIRCULAR, 48 IN

80
LFT

[illegible]

SUBTOTAL (THIS PAGE) =		79.6
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TOTAL = 79.6

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY 126TH STREET</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
715-09064	VIDEO INSPECTION FOR PIPE	4,710 LFT

<p align="center"><i>10-703</i></p> <p align="center"><i>SR 37 MOBILITY STUDY</i></p> <p align="center"><i>126TH STREET</i></p>		
<p>By: <u> <i>BWS</i> <i>11/19/12</i></u></p>	<p>Checked By: <u> <i>BWC</i> <i>11/24/12</i></u></p>	
<p>715-09064</p>	<p align="center">VIDEO INSPECTION FOR PIPE</p>	<p align="right">4,710</p> <p align="right">LFT</p>

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY 126TH STREET</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
715-09064	VIDEO INSPECTION FOR PIPE	4,710 LFT

<p align="center"><i>10-703</i></p> <p align="center"><i>SR 37 MOBILITY STUDY</i></p> <p align="center"><i>126TH STREET</i></p>		
<p>By: <u> <i>BWS</i> <i>11/19/12</i></u></p>	<p>Checked By: <u> <i>BWC</i> <i>11/24/12</i></u></p>	
<p>715-09064</p>	<p align="center">VIDEO INSPECTION FOR PIPE</p>	<p align="right">4,710</p> <p align="right">LFT</p>

<p align="center"><i>10-703</i></p> <p align="center"><i>SR 37 MOBILITY STUDY</i></p> <p align="center"><i>126TH STREET</i></p>		
<p>By: <u> <i>BWS</i> <i>11/19/12</i></u></p>	<p>Checked By: <u> <i>BWC</i> <i>11/24/12</i></u></p>	
<p>715-09064</p>	<p align="center">VIDEO INSPECTION FOR PIPE</p>	<p align="right">4,710</p> <p align="right">LFT</p>

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY 126TH STREET</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
715-09064	VIDEO INSPECTION FOR PIPE	4,710 LFT

<p align="center"><i>10-703</i></p> <p align="center"><i>SR 37 MOBILITY STUDY</i></p> <p align="center"><i>126TH STREET</i></p>		
<p>By: <u> <i>BWS</i> <i>11/19/12</i></u></p>	<p>Checked By: <u> <i>BWC</i> <i>11/24/12</i></u></p>	
<p>715-09064</p>	<p align="center">VIDEO INSPECTION FOR PIPE</p>	<p align="right">4,710</p> <p align="right">LFT</p>

[illegible]

SUBTOTAL (THIS PAGE) =		4710.0
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TOTAL = 4710.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-06528	OUTLET PROTECTOR, 1	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
718-06528	OUTLET PROTECTOR, 1	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
718-06528	OUTLET PROTECTOR, 1	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
718-06528	OUTLET PROTECTOR, 1	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-06528	OUTLET PROTECTOR, 1	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-06528	OUTLET PROTECTOR, 1	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
718-06528	OUTLET PROTECTOR, 1	14 EACH

[illegible]

TOTAL = 14.0

TOTAL = 14.0

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: center;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u></p>		
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: center;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u></p>		
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: center;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u></p>		
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	
		3,000 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: center;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u></p>		
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: center;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u></p>		
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: center;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u></p>		
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: center;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u></p>		
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

[illegible]

		<i>TOTAL =</i>	<i>3000.0</i>
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,452 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,452 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,452 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,452 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,452 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,452 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,452 CYS

[illegible]

TOTAL = 1451.3

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-99153	GEOTEXTILES FOR UNDERDRAIN	11,049 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-99153	GEOTEXTILES FOR UNDERDRAIN	11,049 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-99153	GEOTEXTILES FOR UNDERDRAIN	11,049 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
718-99153	GEOTEXTILES FOR UNDERDRAIN	11,049 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
718-99153	GEOTEXTILES FOR UNDERDRAIN	11,049 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-99153	GEOTEXTILES FOR UNDERDRAIN	11,049 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/19/12 </u>	Checked By: <u> <i>BWS</i> 11/24/12 </u>	
718-99153	GEOTEXTILES FOR UNDERDRAIN	11,049 SYS

[illegible]

	<i>TOTAL =</i>	11048.6
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TOTAL = 11048.6

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 5/11/12

Checked By: BWC 11/24/12

720-07302

INLET, TYPE HA, WITH SLOTTED DRAIN

12 EACH

[illegible]

SUBTOTAL (THIS PAGE) =		12.0
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TOTAL = 12.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
720-45030	INLET, E7	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-45030	INLET, E7	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-45030	INLET, E7	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
720-45030	INLET, E7	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
720-45030	INLET, E7	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-45030	INLET, E7	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-45030	INLET, E7	4 EACH

[illegible]

SUBTOTAL (THIS PAGE) =		4.0
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TOTAL = **4.0**

10-703

SR 37 MOBILITY STUDY
GREENFIELD AVENUE

By: BWS 11/19/12

Checked By: BWC 11/24/12

720-45065

INLET, N12

5
EACH

[illegible]

SUBTOTAL (THIS PAGE) = 5.0

TOTAL = 5.0

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 11/19/12

Checked By: BWC 11/24/12

720-45410

MANHOLE, C4

**12
EACH**

[illegible]

SUBTOTAL (THIS PAGE) =		12.0
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TOTAL = 12.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98174	INLET, B15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98174	INLET, B15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98174	INLET, B15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
720-98174	INLET, B15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98174	INLET, B15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98174	INLET, B15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
720-98174	INLET, B15	12 EACH

[illegible]

SUBTOTAL (THIS PAGE) =		12.0
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TOTAL = 12.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98555	INLET, C15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98555	INLET, C15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98555	INLET, C15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98555	INLET, C15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98555	INLET, C15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98555	INLET, C15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98555	INLET, C15	12 EACH

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		<i>12.0</i>
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TOTAL = *12.0*

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: srs 11/24/12Checked By: srp 11/26/12**731-93945****FACE PANELS, CONCRETE****50,913
SFT**

<i>Begin Station</i>	<i>End Station</i>		<i>Begin Height</i>	<i>End Height</i>		<i>Area (sft)</i>
<i>Since the wall is curved and extends between two alignments (mainline and ramp), all lengths measured in AutoCAD for better accuracy. Segments measured in the direction of travel. Not every wall has all 3 segments. Assumptions made on lengths depending on what the wall looks like. * = measured directly in AutoCAD.</i>						
<i>Segment 1 = Transition from 4 ft to 7 ft</i>						
<i>Segment 2 = 7 ft (around curve)</i>						
<i>Segment 3 = Transition from 7 ft to 4 ft</i>						
NE Wall						
<i>No Wall</i>						
SE Wall						
<i>No Wall</i>						
SW Wall	287.71					
<i>Segment 1</i>	<i>143.86</i>	<i>4</i>	<i>11</i>			<i>1079</i>
<i>Segment 2</i>	<i>143.86</i>	<i>11</i>	<i>11</i>			<i>1582</i>
<i>Segment 3</i>	<i>--</i>	<i>--</i>	<i>--</i>			
NW Wall	362.14					
<i>Segment 1</i>	<i>181.07</i>	<i>4</i>	<i>11</i>			<i>1358</i>
<i>Segment 2</i>	<i>181.07</i>	<i>11</i>	<i>11</i>			<i>1992</i>
<i>Segment 3</i>	<i>--</i>	<i>--</i>	<i>--</i>			
INSIDE WALL AREAS COPIED FROM STRUCTURE BACKFILL AREAS (211-09226)						
NB Wall						
<i>212+98.39</i>	<i>218+91.08</i>	<i>4</i>	<i>27</i>			<i>9181</i>
<i>218+91.08</i>	<i>220+41.40</i>	<i>27</i>	<i>27</i>			<i>4059</i>
<i>220+41.40</i>	<i>226+33.55</i>	<i>27</i>	<i>4</i>			<i>9172</i>
SB Wall						
<i>214+84.13</i>	<i>220+75.97</i>	<i>4</i>	<i>27</i>			<i>9174</i>
<i>220+75.97</i>	<i>222+29.03</i>	<i>27</i>	<i>27</i>			<i>4133</i>
<i>222+29.03</i>	<i>228+21.90</i>	<i>27</i>	<i>4</i>			<i>9184</i>

SUBTOTAL (THIS PAGE) = 50912.6

TOTAL = 50912.6

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: srs 11/24/12Checked By: srp 11/26/12**731-93946****WALL ERECTION****50,913
SFT**

<i>Begin Station</i>	<i>End Station</i>		<i>Begin Height</i>	<i>End Height</i>		<i>Area (sft)</i>
Since the wall is curved and extends between two alignments (mainline and ramp), all lengths measured in AutoCAD for better accuracy. Segments measured in the direction of travel. Not every wall has all 3 segments. Assumptions made on lengths depending on what the wall looks like. * = measured directly in AutoCAD.						
Segment 1 = Transition from 4 ft to 7 ft						
Segment 2 = 7 ft (around curve)						
Segment 3 = Transition from 7 ft to 4 ft						
NE Wall						
No Wall						
SE Wall						
No Wall						
SW Wall	287.71					
Segment 1	143.86	4	11			1079
Segment 2	143.86	11	11			1582
Segment 3	--	--	--			
NW Wall	362.14					
Segment 1	181.07	4	11			1358
Segment 2	181.07	11	11			1992
Segment 3	--	--	--			
INSIDE WALL AREAS COPIED FROM STRUCTURE BACKFILL AREAS (211-09226)						
NB Wall						
212+98.39	218+91.08	4	27			9181
218+91.08	220+41.40	27	27			4059
220+41.40	226+33.55	27	4			9172
SB Wall						
214+84.13	220+75.97	4	27			9174
220+75.97	222+29.03	27	27			4133
222+29.03	228+21.90	27	4			9184

SUBTOTAL (THIS PAGE) = 50912.6

TOTAL = 50912.6

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/24/12 </u>	Checked By: <u> <i>srp</i> 11/26/12 </u>	
731-93947	LEVELING PAD, CONCRETE	3,323 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/24/12 </u>	Checked By: <u> <i>srp</i> 11/26/12 </u>	
731-93947	LEVELING PAD, CONCRETE	3,323 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/24/12 </u>	Checked By: <u> <i>srp</i> 11/26/12 </u>	
731-93947	LEVELING PAD, CONCRETE	3,323 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/24/12 </u>	Checked By: <u> <i>srp</i> 11/26/12 </u>	
731-93947	LEVELING PAD, CONCRETE	3,323 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/24/12 </u>	Checked By: <u> <i>srp</i> 11/26/12 </u>	
731-93947	LEVELING PAD, CONCRETE	3,323 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/24/12 </u>	Checked By: <u> <i>srp</i> 11/26/12 </u>	
731-93947	LEVELING PAD, CONCRETE	3,323 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> 11/24/12 </u>	Checked By: <u> <i>srp</i> 11/26/12 </u>	
731-93947	LEVELING PAD, CONCRETE	3,323 LFT

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		3322.8
<i>TOTAL =</i>		3322.8

TOTAL = 3322.8

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: center;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>BWS</i> <i>4/26/12</i> </u> Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u></p>		
801-01093	TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY	4 EACH

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>BWS</i> <i>4/26/12</i></u> Checked By: <u> <i>BWC</i> <i>11/24/12</i></u></p>		
801-01093	TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY	4 EACH

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>BWS</i> <i>4/26/12</i></u> Checked By: <u> <i>BWC</i> <i>11/24/12</i></u></p>		
801-01093	TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-01093	TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-01093	TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY	4 EACH

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		<i>4.0</i>
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TOTAL = **4.0**

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-03290	CONSTRUCTION SIGN, C	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
801-03290	CONSTRUCTION SIGN, C	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
801-03290	CONSTRUCTION SIGN, C	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-03290	CONSTRUCTION SIGN, C	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-03290	CONSTRUCTION SIGN, C	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-03290	CONSTRUCTION SIGN, C	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
801-03290	CONSTRUCTION SIGN, C	4 EACH

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		<i>4.0</i>
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TOTAL = **4.0**

10-703

SR 37 MOBILITY STUDY
GREENFIELD AVENUE

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-04308

ROAD CLOSURE SIGN ASSEMBLY

4
EACH

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		<i>4.0</i>
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TOTAL = 4.0

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-06625

DETOUR ROUTE MARKER ASSEMBLY

18
EACH

<i>Description</i>						<i>Each</i>
<i>Assumptions: Used MOT Plan for 126th and Keystone as example MOT Plan.</i>						
<i>MOT Phase III</i>						
					Total =	18
<i>MOT Phase IV</i>						
					Total =	18
<i>MOT Phase V</i>						
					Total =	18
					Highest Total =	18

<i>SUBTOTAL (THIS PAGE) =</i>		<i>18.0</i>
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TOTAL = 18.0

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-06640

CONSTRUCTION SIGN, A

24
EACH

[illegible]

SUBTOTAL (THIS PAGE) =		24.0
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TOTAL = 24.0

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-06645

CONSTRUCTION SIGN, B

4
EACH

<i>Description</i>						<i>Each</i>
<i>Assumptions: Used MOT Plan for 126th and Keystone as example MOT Plan.</i>						
MOT Phase I						
<i>Begin Project</i>						2
<i>Midde of project</i>						0
<i>End Project</i>						2
					Total =	4
MOT Phase II						
<i>Begin Project</i>						2
<i>Midde of project</i>						0
<i>End Project</i>						2
					Total =	4
MOT Phase III						
<i>Begin Project</i>						3
<i>Midde of project</i>						1
<i>End Project</i>						0
					Total =	4
MOT Phase IV						
<i>Begin Project</i>						2
<i>Midde of project</i>						0
<i>End Project</i>						0
					Total =	2
MOT Phase V						
<i>Begin Project</i>						0
<i>Midde of project</i>						0
<i>End Project</i>						0
					Total =	0
					Highest Total =	4

<i>SUBTOTAL (THIS PAGE) =</i>		<i>4.0</i>
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TOTAL = 4.0

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 4/26/12Checked By: BWC 11/24/12**801-06710****FLASHING ARROW SIGN****510
DAY**

<i>Description</i>						<i>Day</i>
<i>Assumptions: Used MOT Plan for 126th and Keystone as example MOT Plan.</i>						
MOT Phase I						
<i>Begin Project</i>						45
<i>Midde of project</i>						0
<i>End Project</i>						45
					<i>Total =</i>	90
MOT Phase II						
<i>Begin Project</i>						0
<i>Midde of project</i>						0
<i>End Project</i>						0
					<i>Total =</i>	0
MOT Phase III						
<i>Begin Project</i>						105
<i>Midde of project</i>						0
<i>End Project</i>						105
					<i>Total =</i>	210
MOT Phase IV						
<i>Begin Project</i>						105
<i>Midde of project</i>						0
<i>End Project</i>						105
					<i>Total =</i>	210
MOT Phase V						
<i>Begin Project</i>						0
<i>Midde of project</i>						0
<i>End Project</i>						0
					<i>Total =</i>	0
					<i>Total =</i>	510

SUBTOTAL (THIS PAGE) = 510.0

TOTAL = 510.0

10-703

SR 37 MOBILITY STUDY
GREENFIELD AVENUE

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-06775

MAINTAINING TRAFFIC

1
LS[illegible]

SUBTOTAL (THIS PAGE) =		1.0
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TOTAL = 1.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

[illegible]

SUBTOTAL (THIS PAGE) =		1.0
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TOTAL = *1.0*

10-703

SR 37 MOBILITY STUDY
GREENFIELD AVENUE

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-07118

BARRICADE, III-A

228
LFT

Description						Length (ft)
<i>Assumptions: Used MOT Plan for 126th and Keystone as example MOT Plan.</i>						
MOT Phase I						
Begin Project						0
Midde of project						0
End Project						0
					Total =	0
MOT Phase II						
Begin Project						0
Midde of project						0
End Project						0
					Total =	0
MOT Phase III						
Begin Project						36
Midde of project						156
End Project						36
					Total =	228
MOT Phase IV						
Begin Project						
Midde of project						72
End Project						96
					Total =	168
MOT Phase V						
Begin Project						12
Midde of project						132
End Project						12
					Total =	156
					Highest Total =	228

SUBTOTAL (THIS PAGE) =		228.0
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***TOTAL* = 228.0**

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-07119

BARRICADE, III-B

48
LFT

Description						Length (ft)
Assumptions: Used MOT Plan for 126th and Keystone as example MOT Plan.						
MOT Phase I						
Begin Project						0
Midde of project						0
End Project						0
					Total =	0
MOT Phase II						
Begin Project						0
Midde of project						0
End Project						0
					Total =	0
MOT Phase III						
Begin Project						24
Midde of project						0
End Project						24
					Total =	48
MOT Phase IV						
Begin Project						24
Midde of project						0
End Project						24
					Total =	48
MOT Phase V						
Begin Project						0
Midde of project						0
End Project						0
					Total =	0
					Highest Total =	48

<i>SUBTOTAL (THIS PAGE) =</i>		48.0
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TOTAL = 48.0

10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-08400

TEMPORARY TRAFFIC BARRIER, TYPE 1

3,009
LFT

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		<i>3009.0</i>
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TOTAL = 3009.0

<p align="center"><i>10-703</i></p> <p align="center"><i>SR 37 MOBILITY STUDY</i></p> <p align="center"><i>GREENFIELD AVENUE</i></p>		
<p>By: <u> <i>BWS</i> <i>4/26/12</i> </u></p>	<p>Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u></p>	
<p>801-08507</p>	<p>TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED</p>	<p>296 LFT</p>

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
<i>By:</i>	<u><i>BWS</i></u>	<u><i>4/26/12</i></u>
	<i>Checked By:</i>	<u><i>BWC</i></u>
		<u><i>11/24/12</i></u>
801-08507	TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED	296 LFT

<p align="center"><i>10-703</i></p> <p align="center"><i>SR 37 MOBILITY STUDY</i></p> <p align="center"><i>GREENFIELD AVENUE</i></p>		
<p>By: <u> <i>BWS</i> <i>4/26/12</i> </u></p>	<p>Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u></p>	
<p>801-08507</p>	<p align="center">TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED</p>	<p align="center">296 LFT</p>

<p align="center"><i>10-703</i></p> <p align="center"><i>SR 37 MOBILITY STUDY</i></p> <p align="center"><i>GREENFIELD AVENUE</i></p>		
<p>By: <u> <i>BWS</i> <i>4/26/12</i> </u></p>	<p>Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u></p>	
<p>801-08507</p>	<p align="center">TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED</p>	<p align="center">296 LFT</p>

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
<i>By:</i>	<u><i>BWS</i></u>	<u><i>4/26/12</i></u>
	<i>Checked By:</i>	<u><i>BWC</i></u>
		<u><i>11/24/12</i></u>
801-08507	TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED	296 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
<i>By:</i>	<u><i>BWS</i></u>	<u><i>4/26/12</i></u>
	<i>Checked By:</i>	<u><i>BWC</i></u>
		<u><i>11/24/12</i></u>
801-08507	TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED	296 LFT

[illegible]

<i>SUBTOTAL (THIS PAGE) =</i>		<i>296.0</i>
<i>TOTAL =</i>		<i>296.0</i>

TOTAL = 296.0

10-703

SR 37 MOBILITY STUDY
GREENFIELD AVENUE

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-08508

TEMPORARY TRAFFIC BARRIER, TYPE 2, ANCHORED

3,009
LFT

[illegible]

SUBTOTAL (THIS PAGE) = 3009.0

TOTAL = 3009.0

10-703

SR 37 MOBILITY STUDY GREENFIELD AVENUE

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-09133

TEMPORARY CHANGEABLE MESSAGE SIGN

2
EACH

[illegible]

SUBTOTAL (THIS PAGE) = 2.0

TOTAL = 2.0

10-703

SR 37 MOBILITY STUDY
GREENFIELD AVENUE

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-52817

TEMPORARY CROSSOVER, B

2
EACH

[illegible]

SUBTOTAL (THIS PAGE) = 2.0

TOTAL = 2.0

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>JPS</i> <i>11/28/12</i> </u> Checked By: <u> <i>BWC</i> <i>12/5/12</i> </u></p>		
802-05701	SIGN POST, SQUARE, TYPE 1, REINFORCED ANCHOR BASE	340 LFT

<p align="center"><i>10-703</i></p> <p align="center"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p>		
<p>By: <u> <i>JPS</i> <i>11/28/12</i> </u></p>	<p>Checked By: <u> <i>BWC</i> <i>12/5/12</i> </u></p>	
<p>802-05701</p>	<p>SIGN POST, SQUARE, TYPE 1, REINFORCED ANCHOR BASE</p>	<p>340 LFT</p>

<p style="text-align: right;"><i>10-703</i></p> <p style="text-align: right;"><i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i></p> <p>By: <u> <i>JPS</i> <i>11/28/12</i> </u> Checked By: <u> <i>BWC</i> <i>12/5/12</i> </u></p>		
802-05701	SIGN POST, SQUARE, TYPE 1, REINFORCED ANCHOR BASE	340 LFT

<p align="center">10-703</p> <p align="center">SR 37 MOBILITY STUDY</p> <p align="center">GREENFIELD AVENUE</p>		
<p>By: <u> JPS 11/28/12 </u></p>	<p>Checked By: <u> BWC 12/5/12 </u></p>	
<p>802-05701</p>	<p align="center">SIGN POST, SQUARE, TYPE 1, REINFORCED</p> <p align="center">ANCHOR BASE</p>	<p align="right">340</p> <p align="right">LFT</p>

<p align="center">10-703</p> <p align="center">SR 37 MOBILITY STUDY</p> <p align="center">GREENFIELD AVENUE</p>		
<p>By: <u> JPS 11/28/12 </u></p>	<p>Checked By: <u> BWC 12/5/12 </u></p>	
<p>802-05701</p>	<p align="center">SIGN POST, SQUARE, TYPE 1, REINFORCED</p> <p align="center">ANCHOR BASE</p>	<p align="right">340</p> <p align="right">LFT</p>

<p align="center">10-703</p> <p align="center">SR 37 MOBILITY STUDY</p> <p align="center">GREENFIELD AVENUE</p>		
<p>By: <u> JPS 11/28/12 </u></p>	<p>Checked By: <u> BWC 12/5/12 </u></p>	
<p>802-05701</p>	<p align="center">SIGN POST, SQUARE, TYPE 1, REINFORCED</p> <p align="center">ANCHOR BASE</p>	<p align="right">340</p> <p align="right">LFT</p>

[illegible]

				SUBTOTAL (THIS PAGE) =	340.0
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<i>TOTAL</i> =	340.0
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10-703

SR 37 MOBILITY STUDY
GREENFIELD AVENUE

By: JPS 11/28/12

Checked By: BWC 12/5/12

802-07057

SIGN, PANEL, WITH LEGEND

429
SFT

[illegible]

SUBTOTAL (THIS PAGE) = 429.0

TOTAL = 429.0

10-703

SR 37 MOBILITY STUDY GREENFIELD AVENUE

By: JPS 11/28/12

Checked By: BWC 12/5/12

**802-07138 WIDE FLANGE SIGN POST SUPPORT FOUNDATION,
IX**

2
EACH

[illegible]

SUBTOTAL (THIS PAGE) = 2.0

TOTAL = 2.0

10-703

SR 37 MOBILITY STUDY
GREENFIELD AVENUE

By: JPS 11/28/12

Checked By: BWC 12/5/12

802-07159

CANTILEVER SIGN SUPPORT FOUNDATION, INC.

2
EACH

[illegible]

SUBTOTAL (THIS PAGE) = 2.0

TOTAL = 2.0

10-703

SR 37 MOBILITY STUDY
GREENFIELD AVENUE

By: JPS 11/28/12

Checked By: BWC 12/5/12

802-09840

SIGN, SHEET, WITH LEGEND 0.100 IN THICKNESS

115
SFT

[illegible]

SUBTOTAL (THIS PAGE) = 115.0

TOTAL = 115.0

10-703

SR 37 MOBILITY STUDY
GREENFIELD AVENUE

By: JPS 11/28/12

Checked By: BWC 12/5/12

802-76095

STRUCTURAL STEEL, BREAKAWAY

**681
LBS**

[illegible]

SUBTOTAL (THIS PAGE) = 680.2

TOTAL = 680.2

10-703

SR 37 MOBILITY STUDY GREENFIELD AVENUE

By: JPS 11/28/12

Checked By: BWC 12/5/12

802-76135

OVERHEAD SIGN STRUCTURE, CANTILEVER SINGLE ARM

1 EACH

[illegible]

SUBTOTAL (THIS PAGE) = 1.0

TOTAL = ***1.0***

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
804-06770	DELINEATOR POST	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
804-06770	DELINEATOR POST	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
804-06770	DELINEATOR POST	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
804-06770	DELINEATOR POST	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
804-06770	DELINEATOR POST	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
804-06770	DELINEATOR POST	14 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
804-06770	DELINEATOR POST	14 EACH

[illegible]

SUBTOTAL (THIS PAGE) = 14.0

TOTAL = 14.0

<div>10-703</div> <div>SR 37 MOBILITY STUDY GREENFIELD AVENUE</div> <div>By: <u>DJZ</u> <u>5/3/12</u> Checked By: <u>BWS</u> <u>11/24/12</u></div> <div>808-10031 LINE, MULTI-COMPONENT, BROKEN, WHITE, 4 IN 2,708 LFT</div>		
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<div>10-703</div> <div>SR 37 MOBILITY STUDY GREENFIELD AVENUE</div> <div>By: <u>DJZ</u> <u>5/3/12</u> Checked By: <u>BWS</u> <u>11/24/12</u></div> <div>808-10031 LINE, MULTI-COMPONENT, BROKEN, WHITE, 4 IN 2,708 LFT</div>		
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<div>10-703</div> <div>SR 37 MOBILITY STUDY GREENFIELD AVENUE</div> <div>By: <u>DJZ</u> <u>5/3/12</u> Checked By: <u>BWS</u> <u>11/24/12</u></div> <div>808-10031 LINE, MULTI-COMPONENT, BROKEN, WHITE, 4 IN 2,708 LFT</div>		
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<div>10-703</div> <div>SR 37 MOBILITY STUDY GREENFIELD AVENUE</div> <div>By: <u>DJZ</u> <u>5/3/12</u> Checked By: <u>BWS</u> <u>11/24/12</u></div> <div>808-10031 LINE, MULTI-COMPONENT, BROKEN, WHITE, 4 IN 2,708 LFT</div>		
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<div>10-703</div> <div>SR 37 MOBILITY STUDY GREENFIELD AVENUE</div> <div>By: <u>DJZ</u> <u>5/3/12</u> Checked By: <u>BWS</u> <u>11/24/12</u></div> <div>808-10031 LINE, MULTI-COMPONENT, BROKEN, WHITE, 4 IN 2,708 LFT</div>		
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<div>10-703</div> <div>SR 37 MOBILITY STUDY GREENFIELD AVENUE</div> <div>By: <u>DJZ</u> <u>5/3/12</u> Checked By: <u>BWS</u> <u>11/24/12</u></div> <div>808-10031 LINE, MULTI-COMPONENT, BROKEN, WHITE, 4 IN 2,708 LFT</div>		
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[illegible]

						<i>TOTAL =</i>	<i>2707.3</i>
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10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: DJZ 5/3/12Checked By: BWS 11/24/12**808-10033****LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN****10,789
LFT**

<i>Begin Station</i>	<i>End Station</i>	<i>Begin Offset</i>	<i>End Offset</i>			<i>Length (ft)</i>
Line "A"	NB					
201+50.00	201+98.97	50.62	50.62			49
201+98.97	202+98.97	50.62	62.62			101
202+98.97	207+60.67	62.62	62.62			462
207+60.67	212+98.15	62.62	84.12			538
212+98.39	226+33.55	50.62	50.62			1335
226+33.98	229+30.72	84.12	62.62			298
229+30.72	235+33.72	62.62	62.62			603
235+33.72	238+33.71	62.62	50.62			300
	SB					
201+50.00	202+84.01	-50.35	-50.35			134
202+84.01	205+84.02	-50.35	-62.35			300
205+84.02	211+86.95	-62.35	-62.35			603
211+86.95	214+83.69	-62.35	-83.85			298
214+84.13	228+21.90	-50.35	-50.35			1338
228+21.90	233+59.87	-83.85	-62.35			538
233+59.87	238+33.71	-62.35	-62.35			474
Line "S-I-A"	NW					
63+12.52	64+02.52	16.00	33.29			92
64+54.97	67+96.26	58.33	43.10			342
68+23.62	69+40.99	33.61	16.00			119
	SE					
63+12.52	64+04.76	-16.00	-39.84			95
64+20.71	67+74.55	-50.22	-72.83			355
68+30.25	69+30.36	-41.14	-16.00			103
RAMPS	SE					
10+00.00	13+58.05	12.00	12.00			358
13+58.05	14+57.80	12.00	24.00			100
14+57.80	15+13.11	24.00	27.64			55
14+57.80	16+08.30	12.00	15.44			151
	NE					
11+25.54	11+84.07	13.43	12.00			59
11+84.07	16+09.45	12.00	12.00			425

SUBTOTAL (THIS PAGE) = 9623.3

<i>10-703</i>	
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>	
By: <u> <i>DJZ</i> <i>5/3/12</i> </u>	Checked By: _____
808-10033	LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN
	LFT

<i>10-703</i>	
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>	
By: <u> <i>DJZ</i> <i>5/3/12</i> </u>	Checked By: _____
808-10033	LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN
	LFT

<i>10-703</i>	
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>	
By: <u> <i>DJZ</i> <i>5/3/12</i> </u>	Checked By: _____
808-10033	LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN
	LFT

<i>10-703</i>	
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>	
By: <u> <i>DJZ</i> <i>5/3/12</i> </u>	Checked By: _____
808-10033	LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN
	LFT

<i>10-703</i>	
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>	
By: <u> <i>DJZ</i> <i>5/3/12</i> </u>	Checked By: _____
808-10033	LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN
	LFT

10-703

***SR 37 MOBILITY STUDY
GREENFIELD AVENUE***

By: <u> <i>DJZ</i> <i>5/3/12</i> </u>	Checked By: _____
---	-------------------

808-10033	LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN	LFT
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<i>10-703</i>	
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>	
By: <u> <i>DJZ</i> <i>5/3/12</i> </u>	Checked By: _____
808-10033	LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN
	LFT

[illegible]

SUBTOTAL (THIS PAGE) = 1165.2

TOTAL = 10788.6

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i> </u>		Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>
808-10034	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	11,288 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i> </u>		Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>
808-10034	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	11,288 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i> </u>		Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>
808-10034	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	11,288 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i> </u>		Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>
808-10034	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	11,288 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i> </u>		Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>
808-10034	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	11,288 LFT

<p align="center">10-703</p> <p align="center">SR 37 MOBILITY STUDY</p> <p align="center">GREENFIELD AVENUE</p>		
<p>By: <u>DJZ</u> <u>5/4/12</u></p>	<p>Checked By: <u>BWS</u> <u>11/24/12</u></p>	
<p>808-10034</p>	<p>LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN</p>	<p>11,288</p> <p>LFT</p>

[illegible]

	<i>TOTAL =</i>	<i>11288.0</i>
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10-703

**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

By: DJZ 5/4/12

Checked By: BWS 11/24/12

808-10037

LINE, MULTI-COMPONENT, SOLID, WHITE, 8 IN

**2,830
LFT**

[illegible]

TOTAL =	2829.0
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10-703

SR 37 MOBILITY STUDY GREENFIELD AVENUE

By: DJZ 4/19/12

Checked By: BWS 11/24/12

808-75071

PAVEMENT MESSAGE MARKING, PREFORMED PLASTIC, LANE INDICATION ARROW

8
EACH

[illegible]

SUBTOTAL (THIS PAGE) = 8.0

TOTAL = 8.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75510	TRANSVERSE MARKINGS, PREFORMED PLASTIC, CROSSHATCH LINE, WHITE, 24 IN	409 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75510	TRANSVERSE MARKINGS, PREFORMED PLASTIC, CROSSHATCH LINE, WHITE, 24 IN	409 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75510	TRANSVERSE MARKINGS, PREFORMED PLASTIC, CROSSHATCH LINE, WHITE, 24 IN	409 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75510	TRANSVERSE MARKINGS, PREFORMED PLASTIC, CROSSHATCH LINE, WHITE, 24 IN	409 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75510	TRANSVERSE MARKINGS, PREFORMED PLASTIC, CROSSHATCH LINE, WHITE, 24 IN	409 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>4/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75510	TRANSVERSE MARKINGS, PREFORMED PLASTIC, CROSSHATCH LINE, WHITE, 24 IN	409 LFT

[illegible]

						<i>TOTAL =</i>	408.8
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	269 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	269 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	269 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	269 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	269 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	269 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY GREENFIELD AVENUE</i>		
By: <u> <i>DJZ</i> <i>5/4/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	269 EACH

[illegible]

		<i>SUBTOTAL (THIS PAGE) =</i>		<i>182.0</i>
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**SR 37 MOBILITY STUDY
GREENFIELD AVENUE**

Checked By: BWS 11/24/12

EACH

[illegible]

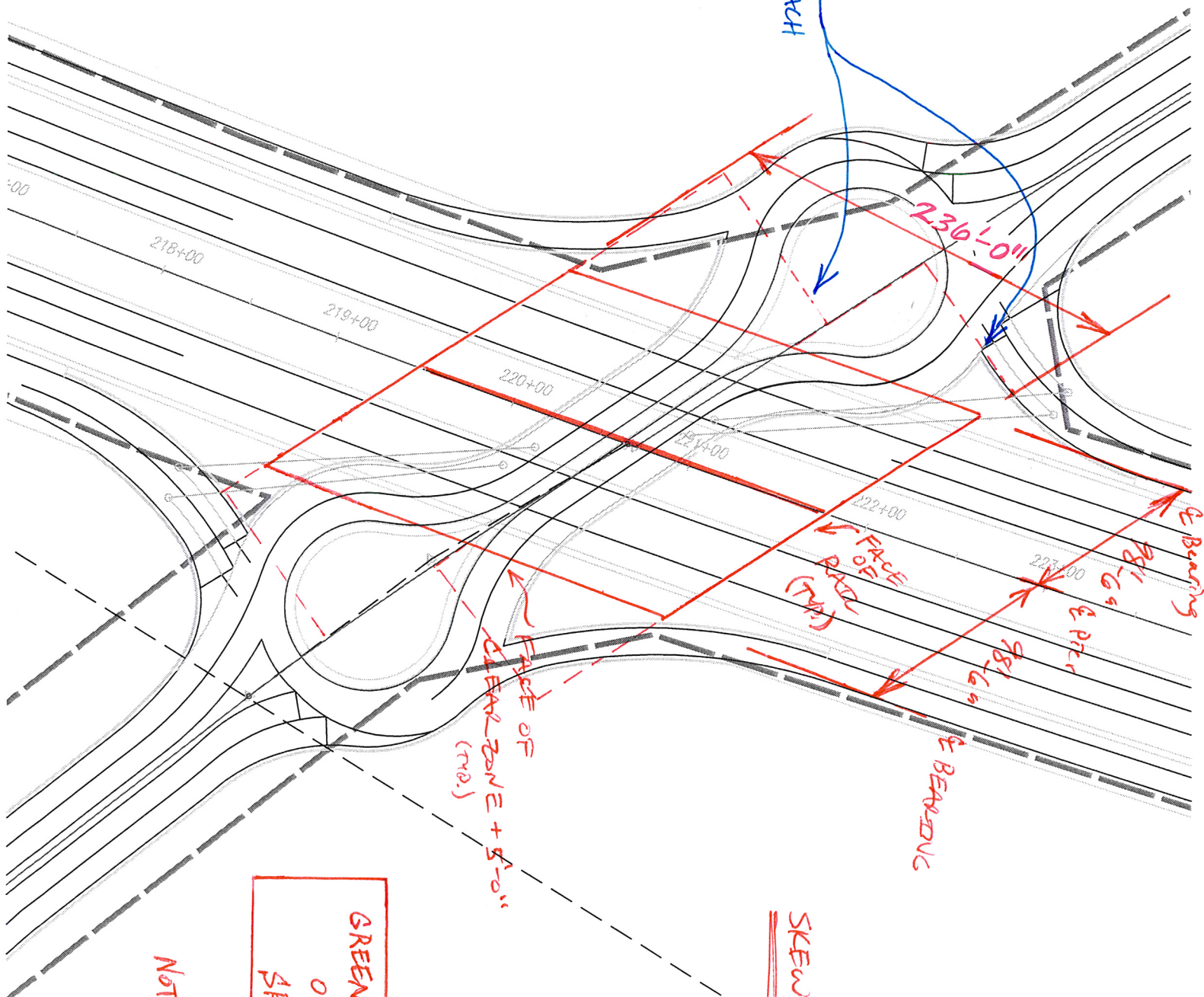
TOTAL = 269.0

BRIDGE QUANTITIES

BRIDGE GEOMETRY
GREENFIELD AVENUE OVER SR 37

✓ J002 5/8/10

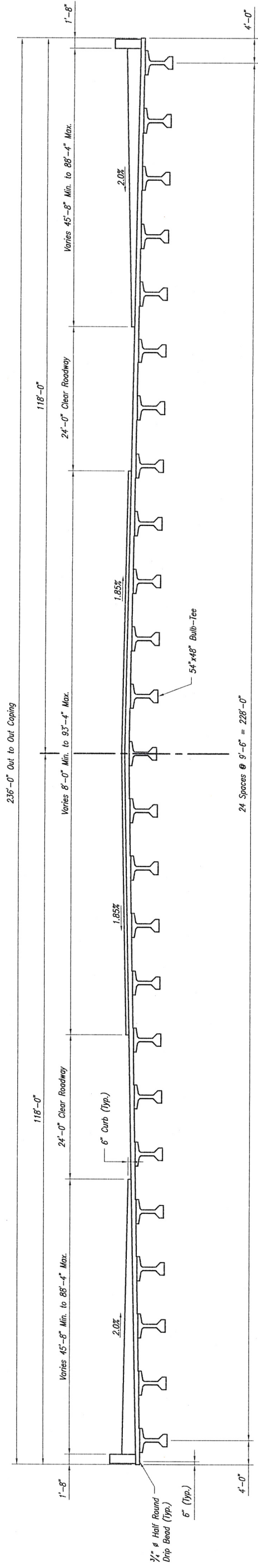
EXTENTS
OF APPROACH
SLAB



GREENFIELD AVE
OVER
SR37

NOT TO SCALE


SKEW 38°



TYPICAL SECTION

Scale: $\frac{1}{8}'' = 1'-0''$

Scale: $\frac{1}{8}'' = 1' - 0''$

 **UNITED**
Consulting

1625 N. Post Road
Indianapolis, IN 46219
Phone 317-595-2555
Fax 317-595-2596
www.ueindy.com



RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED:	DRAWN:	
CHECKED:	CHECKED:	

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED:	DRAWN:	
CHECKED:	CHECKED:	

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED:	DRAWN:	
CHECKED:	CHECKED:	

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED:	DRAWN:	
CHECKED:	CHECKED:	

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED:	DRAWN:	
CHECKED:	CHECKED:	

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED:	DRAWN:	
CHECKED:	CHECKED:	

INDIANA
DEPARTMENT OF TRANSPORTATION

GREENFIELD AVE.
OVER SR 32

INDIANA
DEPARTMENT OF TRANSPORTATION

GREENFIELD AVE.
OVER SR 32

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
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HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
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VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
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HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
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CONTRACT	PROJECT

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
	of
CONTRACT	PROJECT

1008 5/9/12

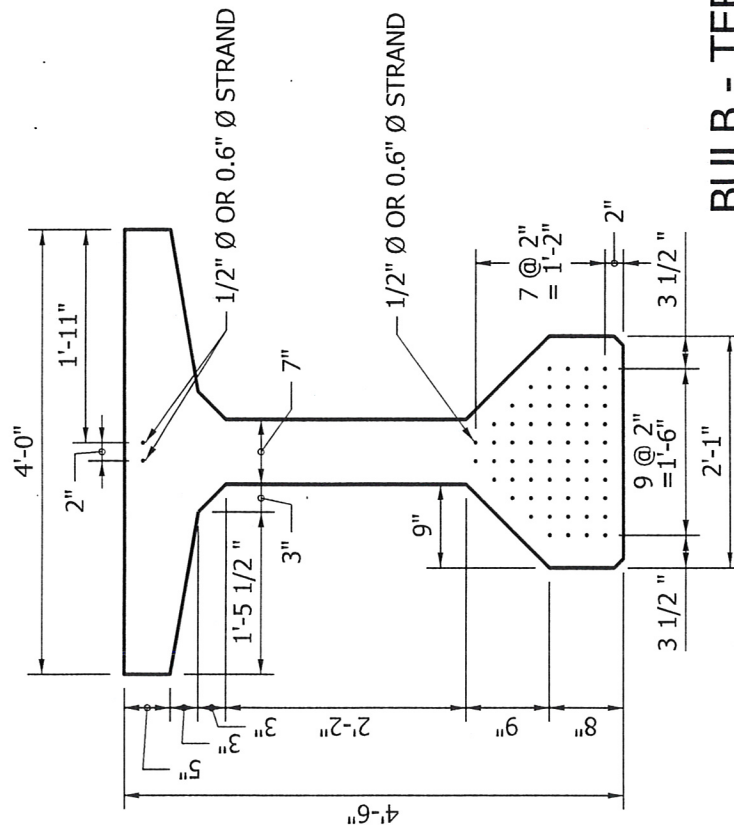
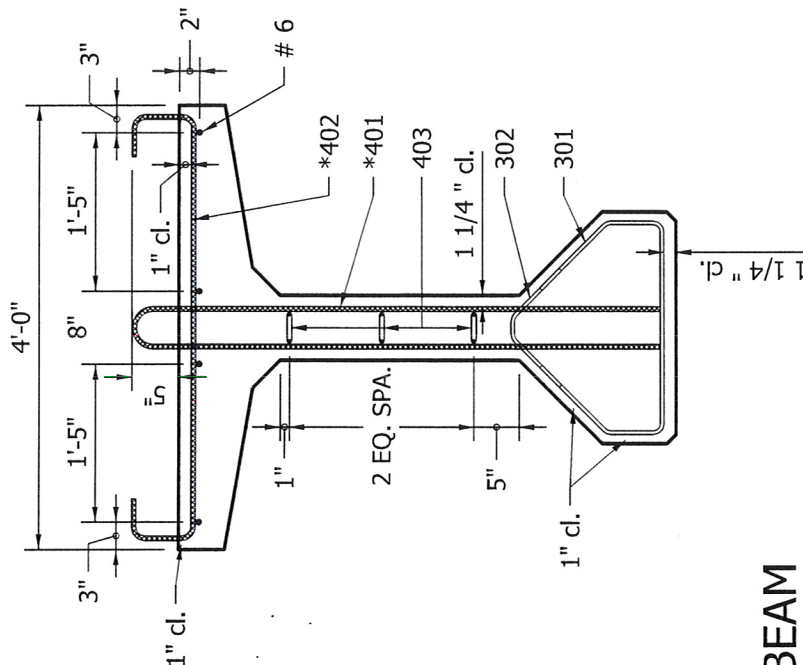
BEAM PROPERTIES

$A_B = 883 \text{ in}^2$
 $I_B = 340,892 \text{ in}^4$
 $S_{TB} = 13,756 \text{ in}^3$
 $S_{BB} = 11,667 \text{ in}^3$
 $Y_{TB} = 24.8 \text{ in}$
 $Y_{BB} = 29.2 \text{ in}$
 $Wt. = 920 \text{ lb/lf}$

NOTES:

1. BARS 301 AND 302 COMBINED TO FORM ONE STIRRUP.

2.  *DENOTES EPOXY-COATED BARS



**BULB - TEE BEAM
TYPE BT 54 x 48**

**Figure 406-14A
(Page 1 of 2)**

Back

Greenfield Ave over SR37

Des by JTB 5/01/2012

Chk by

2012 5/9/12

Rev by _____

Summary of Bridge Quantities

Structure Number

INDOT Item Code	Item Description	unit	Quantity
105-06845	CONSTRUCTION ENGINEERING	LS	3%
110-01001	MOBILIZATION AND DEMOBILIZATION	LS	5%
203-02020	EXCAVATION, FOUNDATION, UNCLASSIFIED	CYS	805
211-02050	B BORROW	CYS	805
302-07455	DENSE GRADED SUBBASE	CYS	584
609-06259	REINFORCED CONCRETE BRIDGE APPROACH, 12 IN.	SYS	3,493
701-06011	DYNAMIC PILE LOAD TEST	EACH	3
701-09559	TEST PILE, DYNAMIC, RESTRIKE	EACH	3
701-09690	TEST PILE, DYNAMIC, 14 IN NON-PRODUCTION	LFT	210
701-08122	PILE, STEEL PIPE, 0.375", 14	LFT	6,060
702-51005	CONCRETE,A,SUBSTRUCTURE	CYS	436
702-51015	CONCRETE,B,FOOTINGS	CYS	299
703-06028	REINFORCING BARS	LBS	89,570
703-06029	REINFORCING BARS, EPOXY COATED	LBS	907,040
704-51002	CONCRETE, C, SUPERSTRUCTURE	CYS	3,248
706-09959	RAILING, CONCRETE, FT	LFT	397
707-07605	STRUCTURAL MEMBERS, CONCRETE BULB-T BEAM, 54 IN. X 48 IN.	LFT	4,925
709-51821	SURFACE SEAL	SFT	55,039 estimated

Greenfield Ave over SR37

Des by JTB 5/01/2012

Chk by MDL 5/9/12

Rev by _____

Proposed Structure # is _____

Greenfield Ave over SR 37

Design Standards = Road Over Under
4R 4R

Functional Classification = Urban Collector Urban Arterial

ADT = xxxx (yr. 2030) xxxx

Design Speed = 35 mph 55

Vertical Clearance Req'd = 16.5 feet

Skew = 38 degrees

Calculated C-C End Brg. Length = 197 feet

USE 197 feet

Span Configuration Anticipated = 1 @ 98.5 feet
1 @ 98.5 feet

Greenfield Ave over SR37

Des by JTB 5/01/2012
Chk by JTB 5/9/12
Rev by

Proposed Structure # is 0

Greenfield Ave over SR 37

Number of Spans = 2 spans

O-O Coping Width = 236.00 feet

C-C End Brg Length = 197 feet

Skew = 38.0000 degrees

O-O Bridge Length = 198.5 feet

Clear Roadway Width = 232.66 feet

Slab Thickness = 8 inches

Number of Piers units = 1

Number of Substructure units = 3

Twin Structure = NO

Type of Slope Wall = MSE Wall

Des by JTB 5/01/2012

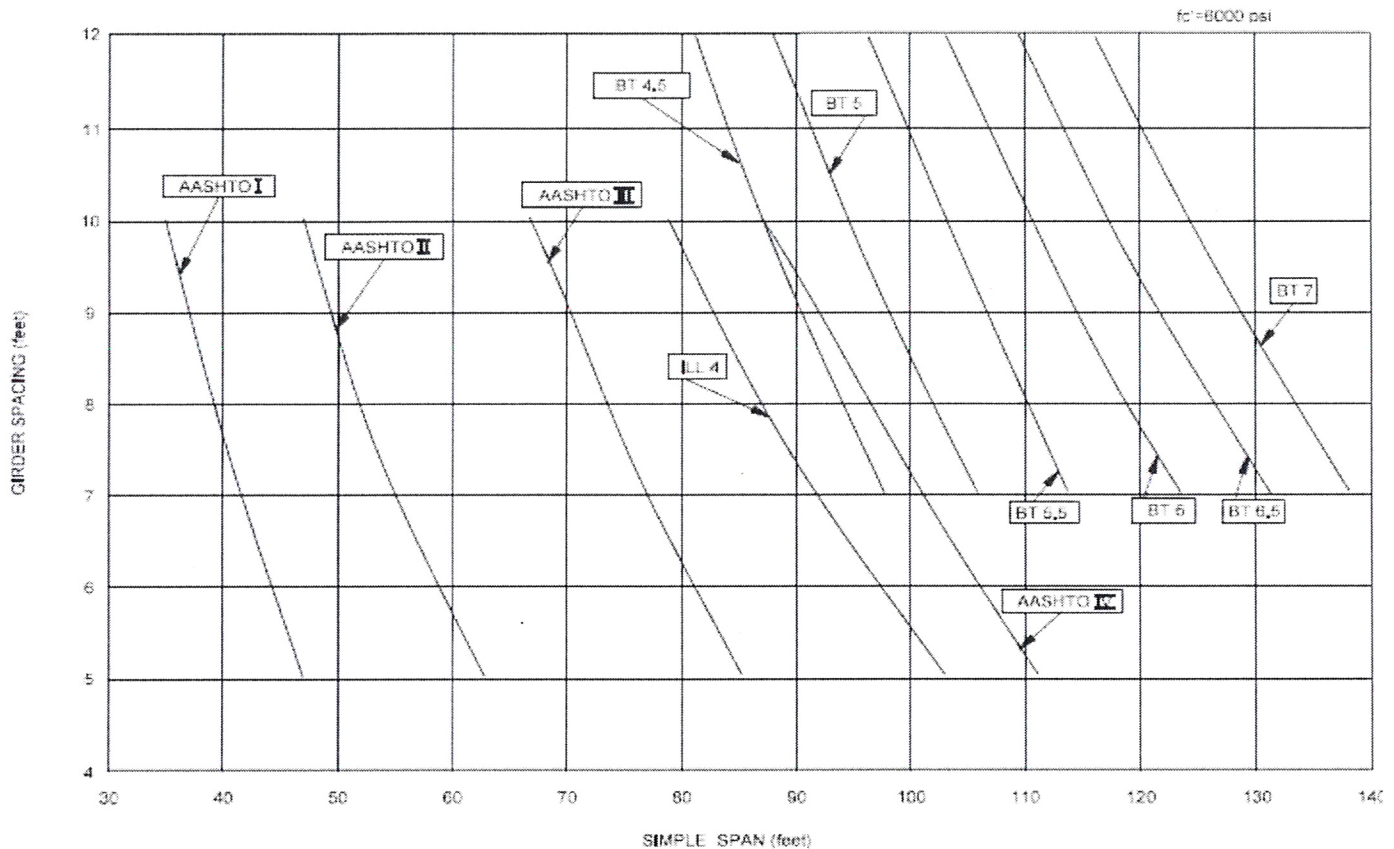
Chk by

APR 5/9/12

Rev by

Beam Quantities

Structure Number 0
Greenfield Ave over SR 37



PRESTRESSED CONCRETE I-BEAM SELECTION CHART

Figure 59-3K

Beam Type = STRUCTURAL MEMBERS, CONCRETE BULB-T BEAM, 54 IN. X 48 IN.

Overhang to be = 4 ft
Spacing to be = 9.5 ft

out to out width = 236.00 ft
Beam Length = 197.00 ft
Beams Needed = 25 ft

Twin Structure = NO

Length Needed = **4,925** ft

Greenfield Ave over SR37

Des by JTB 5/01/2012

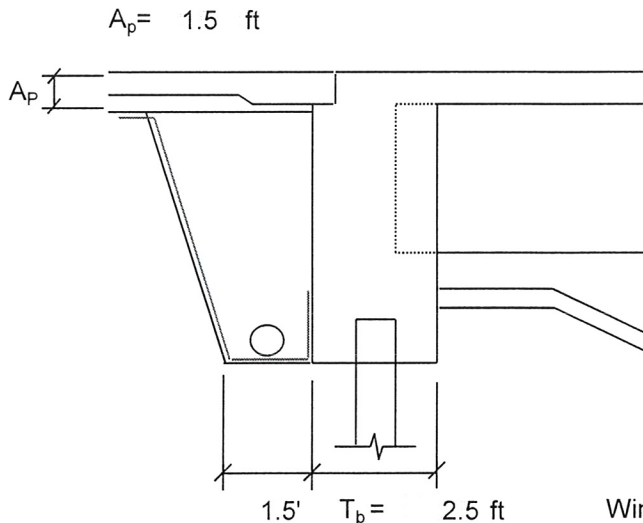
Chk by

JTB 5/9/12

Rev by

Bent Quantities

Structure Number 0
Greenfield Ave over SR 37



$$D_s = 0.83 \text{ ft}$$

$$D_g = 4.50 \text{ ft}$$

$$D_b = 1 \text{ ft}$$

$$D_c = 3 \text{ ft}$$

Structure Data

Out to Out Coping 236.00 ft

Skew 38 degrees

Wingwall Thickness (W_t) 0 ft

Number of Bents (N_b) 2

Reinforcing Rates

Bent Body 145 #/CY

Wingwalls 145 #/CY

Calculated Constants

$$\text{Bent Length } (L_B) = \text{O-to-O Coping} / \cos(\text{skew}) = 299.49 \text{ ft}$$

$$\text{Total Bent Depth } (D_T) = D_s + D_g + D_b + D_c = 9.33 \text{ ft}$$

$$\text{Wing Length } (W_L) = (D_T - D_c) * 2 + 1' = 0.00 \text{ ft}$$

Concrete Quantities

Class C, Superstructure

$$\text{Bent Body } V_B = N_b * (T_b * (D_T - D_s) * L_B) / 27$$

$$V_B = 471.4 \text{ cubic yards}$$

$$\text{Wingwalls } V_W = N_b * (2 * D_T * W_L * W_t) / 27$$

$$V_W = 0.0 \text{ cubic yards}$$

$$\text{Total Class C, Superstructure } 471.4 \text{ cubic yards}$$

Epoxy Coated Reinforcing Bar Quantities

$$\text{Bent Body } 68,356 \text{ lbs.}$$

$$\text{Wingwalls } 00 \text{ lbs.}$$

$$\text{Total } 68,356 \text{ lbs.}$$

Piling Quantities

Number of Piles per Bent 25 piles

Estimated Pile Length 60 ft.

Total Length of Piles 3,000 linear feet

$$\text{Pipe, End Bent Drain, 6" } = N_b * (L_B + 2 * (W_L + 3 * D_T)) = 0.0 \text{ ft.}$$

$$\text{Geotextiles } = N_b * ((D_T - A_p) * 1.031 + 4.5') * L_B / 9 = 0.0 \text{ sys}$$

Aggregate for End Bent Backfill

$$V_{bf} = ((D_T - A_p) / 4 + 1.5) * 1.5 / 2 * (D_T - A_p) * L_B * N_b$$

$$V_{bf} = 0 \text{ cubic yards}$$

Greenfield Ave over SR37

Des by JTB 5/01/2012

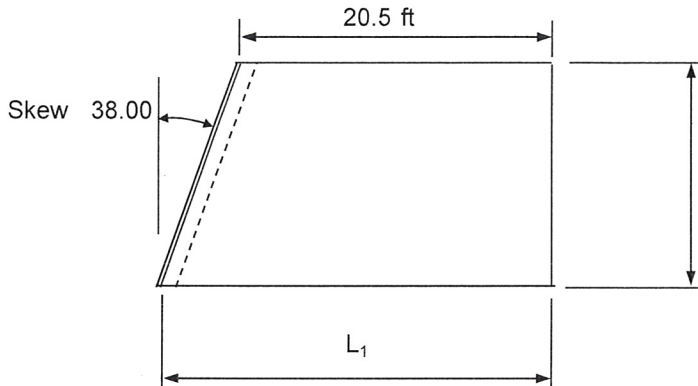
Chk by JTB 5/9/12

Rev by

Approach Slab Quantities

Structure Number 0
Greenfield Ave over SR 37

Number of Approach Slabs 4



O-to-O Copping $W_c =$ 118.00 ft.

$$L_1 = 20.5 + (W_c \times \tan \text{skew})$$

$$L_1 = 112.69 \text{ ft.}$$

$$D_{\text{sub}} = \text{Depth of Aggregate (inches)} = 6$$

$$\text{Reinforced Concrete Bridge Approach (A)} = (L_1 + 20.5)/2 * W_c / 9$$

$$A = 873 \text{ sys per approach}$$

$$\text{Dense Graded Subbase (T}_{\text{base}}) = A * D_{\text{sub}}$$

$$T_{\text{base}} = 146.0 \text{ cys per approach}$$

Epoxy Coated Reinforcing Bars

Reinforcement Rates 35 #/sy

Total Weight 30,560 Lbs.

per approach

Grand Totals

$$A = 3,493 \text{ sys}$$

$$T_{\text{base}} = 584 \text{ cys}$$

$$\text{Reinforcing} = 122,239 \text{ Lbs.}$$

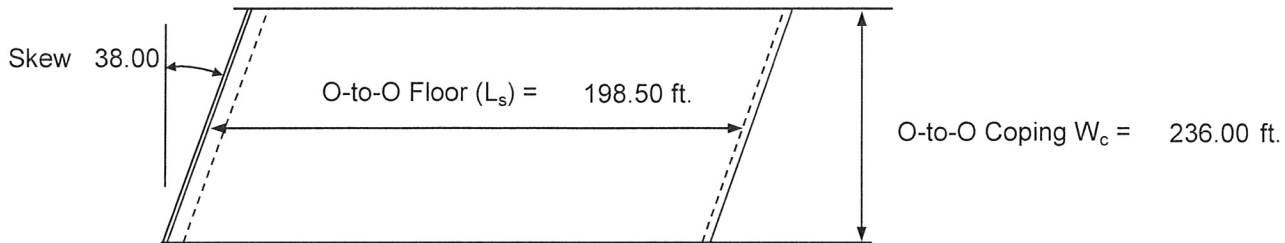
Greenfield Ave over SR37

Des by JTB 5/01/2012

Chk by JTB 5/9/12

Rev by

Deck Quantities

Structure Number 0
Greenfield Ave over SR 37Slab Thickness T_s = 8.00 inchesCoping Depth D_c = 9 inchesClear Roadway Width CR = 232.7 ft

Concrete Quantities

Class C, Superstructure

$$\text{Deck Slab } V_D = (L_s * W_c * T_s) / 27$$

$$V_D = 1156.7 \text{ cubic yards}$$

$$\text{Sidewalk } V_s = (L_s * (W_c - 60') * 1') / 27$$

$$V_s = 1293.9 \text{ cubic yards}$$

Concrete in fillets over beams and in thickened copings
Increase deck concrete by 15%

$$V_T = 2776.9 \text{ cys cubic yards}$$

Twin Structure = NO

of Bridge Rail Trans = 4

Pier Diaphragm - Class, C, Superstr.
(add to Concrete, C, Superstructure)

$$\text{Vol} = 5.17 * 3.5' * 228' * 1' / 27 = 153 \text{ cys}$$

Bridge Railing

$$\text{Area of Rail } A_r = 3.64 \text{ Sq. Ft.}$$

$$\text{Perimeter } P = 8.65 \text{ Ft.}$$

$$\text{LFT} = 397$$

$$V_R = (L_s * A_r) / 27$$

$$V_R = 53.6 \text{ cubic Yards}$$

Surface Seal

$$\text{Deck} = L_s * W_c = 46846 \text{ square feet}$$

$$\text{Coping} = L_s * D_c * 2 = 1324 \text{ square feet}$$

$$\text{Rail} = L_s * P * 2 = 6869 \text{ square feet}$$

$$\text{Total} = 55,039 \text{ square feet}$$

Epoxy Coated Reinforcing Bars

Reinforcement Rates 250 #/cy

Deck 250 #/cy

Rail 330 #/cy

Deck 694225 Lbs.

Rail 17688 Lbs.

Trans. 4532 Lbs.

Total Weight 716,445 Lbs.

Grates, Basins, and Fittings, Cast Iron

$$N_G = 0 \text{ each}$$

Weight per Drain = 1000 Lbs.

Total Weight 0 Lbs.

Roadway Drain (SQ or OS)

$$N_G = 0 \text{ each}$$

Greenfield Ave over SR37

Des by JTB 5/01/2012

Chk by *WJ 5/9/12*

Rev by _____

Excavation Quantities

Structure Number 0
Greenfield Ave over SR 37

Number of Piers $N_p = 1$

$D_c = 6$ ft.

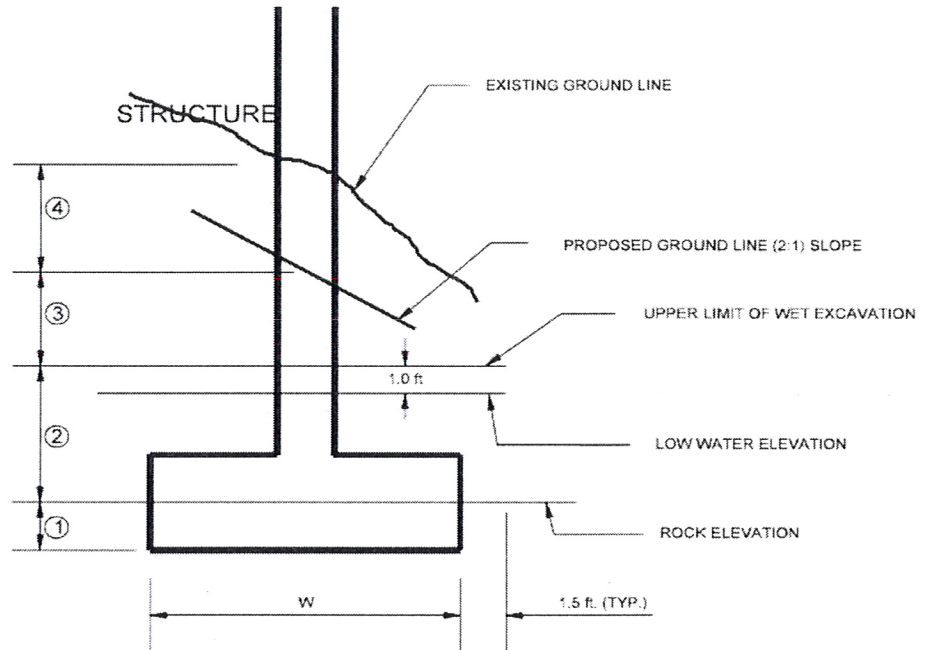
$D_{dry} = 0$ ft.

$D_{wet} = 0$ ft.

$D_x = 0$ ft.

$W = 9$ ft.

$L = 299$ ft.



Class X Excavation (V_x) = $N_p \times L \times W \times D_x / 27 = 0$ cubic yards

Wet Excavation (V_{wet}) = $N_p \times (L+3) \times (W+3) \times (D_{wet}) / 27 = 0$ cubic yards

Dry Excavation (V_{dry}) = $N_p \times (L+3) \times (W+3) \times (D_{dry}) / 27 = 0$ cubic yards

Fnd. Exc.(Unclass.) (V_c) = $N_p \times (L+3) \times (W+3) \times (D_c) / 27 = 805$ cubic yards

Is this structure over a waterway? **No**

B-Borrow (V_b) = Sum of Excavation Items = 805 cubic yards

Rev. 9/2/09

Greenfield Ave over SR37

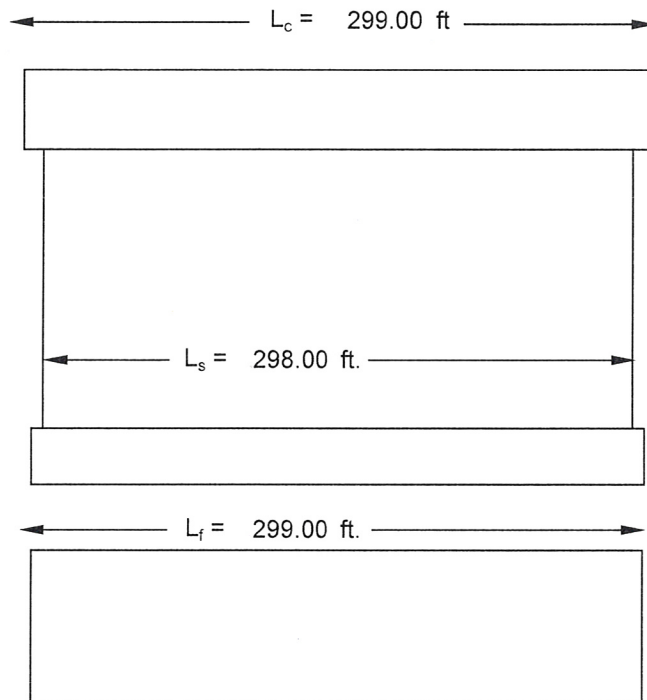
Des by JTB 5/01/2012

Chk by JDR 5/9/12

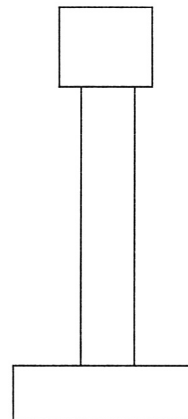
Rev by _____

Pier Quantities

Structure Number 0
Greenfield Ave over SR 37



$W_c = 3$ ft



Number of Piers 1

Reinforcing Rates

Footings 110 #/CY

Stem & Cap 130 #/CY

Concrete Quantities

Class B, Footing	$V_B = L_f \times W_f \times H_f \times 1/27$
	$V_B = 299.0$ cubic yards
Class A, Substructure	$V_A = (L_s \times W_s \times H_s + L_c \times W_c \times H_c) \times 1/27$
	$V_A = 436.0$ cubic yards

Reinforcing Bar Quantities

Footings	32,890 lbs.
Stem and Cap	56,680 lbs.
Total	89,570 lbs.

Piling Quantities

Est of Piles per Pier	54 piles
Estimated Pile Length	60 ft.
Total Length of Piles	3,240 linear feet