

DESIGN SERVICES AMENDATORY AGREEMENT

THIS AMENDATORY AGREEMENT is made and entered into between the **CITY AND COUNTY OF DENVER**, a municipal corporation of the State of Colorado (the “City”), and **CH2M HILL ENGINEERS, INC.**, a Delaware corporation registered to do business in Colorado, with its principal place of business at 9127 South Jamaica Street, Englewood, Colorado, 80112 (the “Design Consultant”), jointly “the Parties.”

RECITALS

1. The City and the Design Consultant previously entered into an agreement dated November 10, 2014 for professional architecture and engineering design services in support of Phase I – Design Development and Public Outreach for the Brighton Boulevard (between 29th and 44th Streets) Project (the “Project”); and

2. The City and the Design Consultant wish to amend the Agreement to authorize Phase II – Final Design and Construction Administration.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and obligations herein set forth, the parties agree as follows:

1. All references to “**Exhibit A**” in the Agreement shall be amended to read: “**Exhibit A** and **Exhibit A-1**” as applicable. The scope of work marked as **Exhibit A-1** attached to this Amendatory Agreement is hereby incorporated by reference.

2. Section 3.01 of the Agreement entitled “**Fee for basic services**”, subsection (b), entitled “**Fee for Phase II Basic Services**” is hereby amended to read in its entirety as follows:

“(b) **Fee for Phase II Basic Services**: The City agrees to pay the Design Consultant, as full compensation for all Phase II basic services rendered hereunder, a fee not to exceed **ONE MILLION FOUR HUNDRED TWENTY FIVE THOUSAND DOLLARS AND ZERO CENTS (\$1,425,000.00)** in accordance with the billing rates and project budget stated in **Exhibit A-1**.”

3. Section 3.02 of the Agreement, entitled “**Reimbursable Expenses**” is hereby amended to read in its entirety as follows:

“**3.02 Reimbursable Expenses**. The following expenses will be reimbursed at cost with mileage being reimbursed at the then current IRS rate: mileage, parking, photocopying, graphic expenses, postage and delivery costs. Expenses not identified in this paragraph, specifically identified in **Exhibit A** and **Exhibit A-I** or preapproved in writing by the City will not be reimbursed. All other expenses shall be included in the Design Consultant’s fee and will not be reimbursed hereunder. The maximum amount to be paid for all reimbursable expenses under this Agreement is **THIRTY THOUSAND DOLLARS AND ZERO CENTS (\$30,000.00)** unless an additional amount is approved by the Executive Director or his designee in writing, subject to the

Maximum Contract Amount stated herein. Unless this Agreement is amended in writing according to its terms to increase the Maximum Contract Amount, any increase in the maximum amount of reimbursable expenses will reduce the Design Consultant's maximum fee amount accordingly."

4. Section 3.03 of the Agreement entitled "**Additional Services**" is hereby amended to read in its entirety as follows:

3.03 Additional Services. If pre-approved additional services are performed by the Design Consultant, the City agrees to pay the Design Consultant for such additional services in accordance with Section 2.08. The maximum amount to be paid by the City for all additional services under this contract is **ONE HUNDRED FORTY THOUSAND DOLLARS AND ZERO CENTS (\$140,000.00).**"

5. Section 3.05(a) of the Agreement, entitled "**Maximum Contract Amount**", is hereby amended to read in its entirety as follows:

3.05 Maximum Contract Amount.

(a) Notwithstanding any other provision of the Agreement, the City's maximum payment obligation will not exceed **TWO MILLION THREE HUNDRED FOURTEEN THOUSAND THREE HUNDRED TWENTY FIVE DOLLARS AND ZERO CENTS (\$2,314,325.00)** (the "Maximum Contract Amount"). The City is not obligated to execute an Agreement or any amendments for any further services, including any services performed by Design Consultant beyond that specifically described in **Exhibits A** and **A-1**. Any services performed beyond those set forth therein are performed at Design Consultant's risk and without authorization under the Agreement."

6. Section 4.01 of the Agreement entitled "**Term**" is hereby amended to read in its entirety as follows:"

4.01 Term. The term of this Agreement shall commence on November 1, 2014 and shall expire on January 31, 2016, unless sooner terminated, upon final completion of the Project."

7. Except as amended herein, the Agreement is affirmed and ratified in each and every particular.

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Contract Control Number:

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of

SEAL

CITY AND COUNTY OF DENVER

ATTEST:

By _____

APPROVED AS TO FORM:

REGISTERED AND COUNTERSIGNED:

By _____

By _____

By _____



Contract Control Number: PWADM-201418034-01

Contractor Name: CH2M HILL ENGINEERS, INC.

Danielle L. Yearsley

By: _____

Name: Danielle L. Yearsley
(please print)

Title: Designated Manager
(please print)

ATTEST: [if required]

By: _____

Name: _____
(please print)

Title: _____
(please print)



EXHIBIT A-1

EXHIBIT A
BRIGHTON BOULEVARD
Phase II- Final Design and Construction Administration
SCOPE OF WORK
April 9, 2015

Overview

The City and County of Denver (the “City”) is contracting with the CH2M HILL Team (the “Consultant”) to provide design services for Brighton Boulevard from 29th to 44th Streets.

The redevelopment of Brighton Boulevard is part of a broader vision of Mayor Michael B. Hancock to establish a new gateway into Denver between Denver Union Station (DUS) and Denver International Airport (DIA) and is a key placemaking component of the 23-mile Corridor of Opportunity and one of six major projects of the North Denver Cornerstone Collaborative (NDCC), which was created by Mayor Hancock to align all of these efforts under one coordinated vision as part of creating a world class city and to help rebuild and reconnect the neighborhoods of Globeville, Elyria and Swansea to the rest of the City.

This Project involves professional design engineering and related services required to produce final design of a hybrid reconstruction concept of Brighton Boulevard (29th to 44th Streets) in accordance with the Phase 1- Design Development and Public Outreach work. This project will also take into account the transition needed between 28th and 29th Streets and the transition to the interchange zone on the north end.

During Phase 1, the City has continued to work with property owners who are in the midst of design and redevelopment along the corridor, mainly between 31st Street and 35th Street. Through this process a hybrid concept has been refined which incorporates current development plans into the preliminary design and provides an interim solution that safely transitions between properties that are redeveloping and those that are remaining. In addition, this hybrid design concept identifies opportunities to provide on street parking. As design progresses, this hybrid concept will continue to be refined and evolve through conversations with adjacent property owners.

It is assumed that the hybrid design will only require right-of-way acquisitions at key intersection corners and temporary construction easements at all other locations. At properties that are redeveloping, the City and Developers will work towards an agreement so that elements of the ultimate vision can be designed outside of the existing right-of-way without acquiring additional right-of-way.

It is assumed that construction funding for this project is available.

The basic services which must be performed on the Project have been separated into the phases described below. This second agreement will establish the tasks and maximum price for Phase II. If, in its sole discretion, the City decides to authorize the Consultant to proceed with Phase II the phase will be authorized by written amendment.

Phase I- Preliminary Design: Phase I-Design Development and Public Outreach consists of the work described in this scope of work.

Phase II- Final Design and Construction Administration: If the City, in its sole discretion, decides to proceed with Phase II- Final Design and Construction Administration, for a selected segment of the project, the Consultant and the City will develop a Scope of Work that will be incorporated into this agreement. Any Phase II work performed by the Consultant before the City executes a written amendment will be performed at the Consultant’s risk.

Project Timeline

This is a scope of work for the Final Design and Construction Administration Contract. It is anticipated

that the following tasks will be completed in six (6) months from the issuance of the Notice to Proceed. The proposed schedule of activities is below.

SCHEDULE OF ACTIVITIES

<u>Task</u>	<u>Tasks</u>	<u>Month</u>					
		1	2	3	4	5	6
1	Project Management						
2	Meetings						
3	Civil Engineering Design						
4	Drainage & Water Quality Design						
5	Signing, Striping, and Traffic Signal Design						
6	Traffic Control Design						
7	Cost Estimating						
8	Urban/Hardscape Design						
9	Landscaping, Irrigation, and Lighting Design						
10	Public Outreach and Public Meetings						
11	Utilities						
12	Survey						
13	Business Improvement District (BID) Support						
14	Integrated Contractor (IC) Coordination						
15	Additional Services						

Note - See specific tasks for deliverables

Specific Tasks

The following are the specific tasks for the Brighton Boulevard Final Design.

Task 1: Project Management

The City Project Manager (PM) for the Brighton Boulevard Design will be responsible for the day-to-day management of the Consultant team and satisfactory completion of the scope of work. Specifically, the City PM will:

- Have primary authority for contract management, direction and enforcement
- Review and approve the Consultant’s monthly progress reports and invoices
- Review and approve any significant schedule changes and any contract modifications
- Review and approve all meeting agendas, minutes and meeting materials prepared by the Consultant
- Hold regular meetings with the Project Management Team (PMT). The Project Management Team will include, but is not limited to, representatives from Public Works, Parks and Recreation, Office of Economic Development, Environmental Health, Community Planning and Development, North Denver Cornerstone Collaborative, and Development Services
- Lead meetings with support of Consultant project manager

The Consultant PM will:

- With input from the Project Management Team (PMT), update a Project Execution Plan for the final design.
 - The Project Execution Plan will specify the roles and responsibilities of the Consultant and other design participants, identify goals and key objectives, identify specific work tasks, sub-tasks and provide a timeline, schedule and scope of work.
 - Weekly coordination with the City PM
 - Monitor the project budget, schedule, and deliverables

- Oversee and manage the sub-consultants
- Prepare and send monthly invoices to the City PM

Deliverables:

- Updated Project Execution Plan including
 - Detailed Final Design Project Schedule
- Monthly Invoices

Task 2: Meetings

The Consultant will prepare for and attend the following meetings.

Meetings:

- Project Manager Meetings
- Q3 2015 NDCC Meeting
- Q4 2015 NDCC Meeting
- Six (6) PMT meetings
- Miscellaneous meetings (assume 18)
- Plan review meeting

Deliverables:

- Meeting notes from PMT and Miscellaneous Meetings

Task 3: Civil Engineering Design

For Brighton Boulevard from the 28th Street transition zone to 44th Street, the following civil engineering design will be completed.

Final Roadway Design

- Typical Sections
 - Finalize the Brighton Boulevard typical sections
 - Finalize cross street typical sections, including pavement sections. Assume nine (9) cross streets
- Alignments
 - Finalize Brighton vertical alignment based on previously identified critical points from the survey
 - Finalize cross street horizontal alignments (9)
 - Finalize cross street vertical alignments (9)
- Intersections
 - Finalize intersection design including bike facility interface
 - Finalize curb returns
- Access
 - Assume sixty (60) individual access locations.

- Finalize horizontal layouts of accesses
- Develop vertical layouts of accesses
- Transitions
 - Finalize transitions for cross section elements such as sidewalks, amenity zones, and bike facility at intersections.
 - Finalize transition from two way bike facility to protected bicycle lane at 29th
- Bicycle Facility
 - Finalize cycle track type and design and/or protection treatment for bicycle facility along corridor
 - Continue working with traffic engineering services and public works to determine feasibility of protected bicycle intersections
 - Hold two (2) meeting with Public Works to determine appropriate location and feasibility of the protection at intersections
 - Determine operations of the intersection with protection using bicycle phasing, including bicycle lead intervals or all bicycle/pedestrian phase
 - Utilize existing counts taken during previous planning efforts
 - VISSIM software will be utilized to determine the signal operations with pedestrian, bicycle, and vehicular phases included
 - AM and PM peak hour will be analyzed at up to 3 signalized intersections
 - Finalize detail treatment of bicycle facility at driveways and intersections utilizing best practices identified in NACTO and similar bicycle treatment guidelines. Appropriate signing and striping will be identified at all driveways along the corridor.
 - Continue providing input to Developers on transitions from new development plans to existing conditions on Brighton Boulevard
- Bus stops
 - Finalize locations for bus pads and bus stops
 - Finalize layouts for bus pads and bus stops
- Concrete Jointing Plans
 - Develop concrete jointing plans
- Structural Engineering Support
 - Develop structural details for special inlets
 - Develop structural details for the seating bench/wall. This seating bench/wall will be a key element of the urban design for the corridor.
- Cross Sections
 - Finalize cross sections for Brighton Boulevard
 - Finalize cross sections for cross streets (9 streets)
 - Cross sections will be every 20 ft and at key locations.

- Removals
 - Finalize removals plans
- Finalize civil engineering design quantities
- Coordinate with other disciplines (drainage, bike facility design, urban design)
 - Incorporate drainage facility design and water quality features in plan set
 - Incorporate urban design features in plan set
- Perform internal QC review of the Final Civil Plans
- Update the Final Civil Plans based on QC review comments

Final Civil Plans

- Print, assemble, and submit the final design plan package
 - Roadway, Drainage, Urban Design Plans shall be 1"= 50' Scale
 - See table at the end of this document for assumed sheet count for Final Civil Plans
- Update the Final Civil Plans based on City and Supporting Agencies review comments
- Print, assemble, and submit the Construction Bid plan package

Deliverables:

- Final Civil Plans
 - 20 Hard Copy Sets
 - 1 CD with PDF files of the plan sheets
 - 1 CD with the AutoCAD design files
- Documentation of comments and responses on Final Civil Plans
- Construction Bid Plans
 - 20 Hard Copy Sets
 - 1 CD with PDF files of the plan sheets
 - 1 CD with the AutoCAD design files

Task 4: Drainage and Water Quality Design

Assumptions:

- Design of regional drainage facilities are not part of this scope of work.
- 2-foot base mapping provided by CCD or UDFCD is adequate for drainage basin delineation for offsite drainage basins.
- Major drainageway basin planning studies performed for UDFCD and CCD shall be utilized to understand regional drainage patterns only. Improvements recommended in these plans shall be considered as future improvements, and not designed with this project.

For Brighton Boulevard from the 28th Street transition zone to 44th Street, the following Drainage work will be completed.

Hydrology

- Finalize establishment of drainage basin data: delineate, determine size, waterway geometrics, vegetation cover, land use

- Finalize analysis of hydrology for inlets, and culvert locations
- Finalize analysis of hydrology for street section, water quality structures, inlets, ditches, and green infrastructure

Hydraulics

- Accomplish the final design of local drainage system
- Finalize culvert pipe sizes, type, shape and material
- Finalize analysis of South Platte River floodplain impacts for 100-year flow
- Permanent Water Quality Facilities
 - Finalize design of permanent water quality facilities
 - Coordinate locations of treatment areas with project team/ client; coordinate to meet objectives of project (Urban Design, Landscape, Transportation, and Engineering)
- Finalize Stormwater Management Plan (SWMP)
- Prepare a final Hydraulics and Hydrology report which shall consider historical flows of the basin and suggest appropriate measures to address passing of such flows. The Hydraulics and Hydrology report shall address existing storm water culvert crossings as well as analysis of the existing and proposed roadway drainage systems, including inlets, pipes and ditches.
- Final Water Quality Report
 - Final water quality report and water quality plan to address permanent water quality requirements for the project
- Prepare final drainage design plans
- Lead and attend drainage specific meetings. (Assume bi-monthly meetings for 6 months- 12 meetings)

Deliverables:

- Final Hydraulics and Hydrology Report
- Final Water Quality Report including Stormwater Management Plans
- Final Drainage Plans

Task 5: Signing, Striping, and Traffic Signal Design

For Brighton Boulevard from the 28th Street transition zone to 44th Street, the following Signing, Striping, and Traffic Signal Design work will be completed.

Signing and Striping

- Signing
 - Develop final signing plan
- Striping
 - Develop final striping design and plans
- Develop Bike Facility final signing and striping details
 - Details will focus on intersections, driveways, transition zones, and conflict points

- Prepare final signing and striping design quantities

Traffic Signal Design

Assumptions:

- This scope does not include design of a new signal at 31st
- Signals will be designed to the hybrid design concept and may require minimal ROW. Some traffic signal equipment would need to be relocated for the future ultimate condition.
- Traffic signal at 29th will be designed by others. The ultimate 44th Street Signal will be designed as part of the I-70 Project. Some bicycle facility specific signal elements will need to be added to the existing 44th Street signal.

Traffic Signal Design

- Develop final signal design for two (2) intersections- 35th and 38th Streets
 - Signal design will include location for controller cabinet, pedestrian push buttons, signal poles and mast arms, conduit and traffic signal heads
 - Recommended signal head configuration will be shown for vehicular and pedestrian traffic
 - Develop signal phasing to be included on the signal design sheets
- Review and provide comments on the 29th Street Intersection Signal Design
- Develop final signal design for pedestrian crossing at 33rd
 - Signal design will include pedestrian push buttons, signal poles, signal heads (beacons or heads to be determined with TES), and pedestrian indications.
- Develop Bicycle Facility signal details
 - Identify final signalization treatments to accommodate bicycle and pedestrian traffic at 35th, 38th, and 44th Streets based upon operational analysis completed in Task 3
 - Review and provide bicycle facility focused comments on the 29th Street Intersection
- Prepare final signal design quantities

Deliverables:

- Final Signing and Striping Plans
- Final Signal Plans

Task 6: Traffic Control Design

For Brighton Boulevard from the 28th Street transition zone to 44th Street, the following Traffic Control work will be completed.

Traffic Control Design

- Develop final temporary traffic control design.
 - Including identification of potential roadway, bicycle facility, and pedestrian detours
 - Including any proposed road closures
 - Including identification of possible construction stages
 - Including identification of construction haul routes
- Prepare final traffic control plans
 - Plans will include overall concept notes, standard traffic control details, and typical phasing section sheets
 - Plans will include detailed individual phasing plans showing striping and traffic control devices.
 - Plan sheets showing roadway and bicycle facility detours routes
- Develop traffic control design quantities

Deliverables:

- Final Traffic Control Plans
- Traffic Control Quantities

Task 7: Cost Estimating

For Brighton Boulevard from the 28th Street transition zone to 44th Street, the following Cost Estimating work will be completed:

Engineer's Estimate

- Develop a construction cost estimate. Calculate quantities and unit price analysis for all identified pay items. Include a contingency for unknown items.

Deliverables:

- Final Construction Cost Estimate

Task 8: Urban/Hardscape Design

For Brighton Boulevard from 28th Street transition zone to 44th Street, the following pavement, site design and furnishings design work will be completed to prepare final design plans and establish the final design concepts and final capital costs. The team will develop a Final Design package for the areas from 29th Street to 44th Street.

- **Streetscape Design**
 - Pavements
 - Sidewalk layout and materials finishes
 - Concrete finishes and jointing
 - Enhanced pavement locations, specifications and design
 - Location and design of Suspended Pavement Systems, including specification of manufacturer
 - Pavement layout and design at Suspended Pavement Systems, including selection of manufacturer and unit paver type, color and size.
 - Tree Grate design and specification

- Pavement construction details and specifications
- Suspended pavement system details and specifications
- Coordinate design of Bus Stop layout and amenities
- Site Walls and Improvements
 - Layout, type and quantity of seating and site walls
 - Construction details and specifications.
 - Coordination with GID on potential additional enhancements to seat walls
- Porous Landscape Detention Areas
 - Location, size and water quality volume (coordination with Civil Engineer)
 - Coordinate design of sedimentation/inlet system, overflow and subgrade piping with Civil Engineer
 - Location and design of required safety railings and barriers at edges
- Furnishings
 - Benches, trash receptacles, bike racks, etc (coordinate location and quantity. Items to be provided by GID)
 - Bollard location, quantity, manufacturer and specification
 - Wayfinding and Identity Signage (coordinate location and quantity. (Items to be provided by GID)
 - Location and size requirements for Public Art installations (Coordinate with GID)

Deliverables:

- Final Site Layout and Materials Plans
- Final Site Construction details and specifications
- Final Landscape Architect's Opinion of Probable Costs
- Final specifications
- Construction Bid Site Layout and Materials Plans
- Construction Bid Site Construction details and specifications
- Construction Bid Landscape Architect's Opinion of Probable Costs
- Construction Bid specifications
- One (1) additional interim pricing set and Opinion of Probable Costs

Task 9: Landscape Architecture, Irrigation, and Lighting Design

For Brighton Boulevard from 28th Street transition zone to 44th Street, the following Landscaping, Irrigation, and Lighting work will be completed to prepare final design plans and establish the final design concepts and final capital costs. The team will develop a Final Design package for the areas from 29th Street to 44th Street.

These plans will include the following:

- Planting
 - Plant Material
 - Location, species and size
 - Coordination with Forestry Department on street tree species, size and diversity
 - Tabulation of plant material quantities
 - Water Quality Facilities / Porous Landscape Detention
 - Plant materials, species, location and size
 - Recommended soil profile/mix (coordination with the Civil Team)
 - Free-Standing Planters

- Planting Details
 - Typical tree and shrub planting details
 - Tree planting at Suspended Pavement Systems
 - Planting details at Porous Landscape Detention (PLD)
 - Tree staking
- Irrigation
 - Location, size and coordination of irrigation mainline
 - Location and quantity of specified irrigation fixtures and piping
 - Location and quantity of irrigation controllers and meters
 - Sleeving and coordination with the Civil Team
 - Electrical conduit required for irrigation system
- Lighting
 - Location and specification of roadway lighting (coordinate with Civil Engineer and Xcel Energy)
 - Location, type and quantity of pedestrian/landscape lighting
 - Specification of pedestrian/landscape lighting fixtures
 - Photometric calculations and plans for pedestrian/landscape lighting
 - Coordinate electrical engineering drawings, including conduit, metering and transformer locations (engineering drawings by others)
-

Deliverables:

- Final Planting Plans and details
- Final Lighting Plans, specifications, and Electrical Plans (by Electrical Engineer)
- Final Irrigation Plans and specifications (by Irrigation Subconsultant)
- Final Landscape Architect's Opinion of Probable Costs
- Final planting, lighting and irrigation specifications
- Construction Bid Planting Plans and details
- Construction Bid Lighting Plans, specifications, and Electrical Plans (by Electrical Engineer)
- Construction Bid Irrigation Plans and specifications (by Irrigation Subconsultant)
- Construction Bid Landscape Architect's Opinion of Probable Costs
- Construction Bid planting, lighting and irrigation specifications
- One (1) additional interim pricing set and Opinion of Probable Costs

Task 10: Public Outreach and Public Meetings

For Brighton Boulevard from 28th Street transition zone to 44th Street, the following public outreach and public meeting work will be completed

Messaging and Project Materials

- The Consultant will develop a message platform to guide all project communications. In addition, the Consultant will develop one (1) project overview fact sheet and up to two (2) other topic-specific handouts (e.g. FAQs, issue-specific fact sheets).

Public Meetings

- Plan and execute one public open-house meetings. Develop and manage a strategic workplan for each public meeting to ensure consistency in flow and message. Provide feedback on message and design of meeting materials (boards, presentation). Develop online public comment tool for each and provide a summary of input.

Workgroup Meetings

- The Consultant will plan, promote, convene, facilitate and summarize up to nine (9) meetings of the Brighton Design Workgroup.

Digital Communications

- The Consultant will provide monthly content updates to the existing project website within the City's denvergov.org domain. GBSM will also create and maintain a stakeholder and comment database through its TrackVia system. Up to nine (9) project updates will be sent to the entire stakeholder database.

NDCC Coordination

- The Consultant will provide NDCC with project updates to include in their email coordination. In addition, the Consultant will help staff up to two (2) North Denver Cornerstone Collaborative Open House meetings and provide input on the project materials to be displayed at them.

Issues Management

- The Consultant will provide up to thirty (30) hours of senior level strategic planning, issues-management counsel and strategic guidance throughout the course of the project. The focus of this task will depend on the needs of the project but will likely focus on stakeholder relations, crisis preparedness and management and other top-level issues.

Deliverables:

- Fact Sheets
- Two (2) Topic-Specific Handouts
- Digital content updates

Task 11: Utilities

For Brighton Boulevard from the 28th Street transition zone to 44th Street, the following Utility work will be completed:

Existing Trolley Track Location

Based on historic information and maps, there is a high likelihood that trolley track are located under Brighton Boulevard. This work effort will try to determine if trolley tracks are present under Brighton Boulevard. This effort includes the following:

- Meet with the City to identify four areas for a GPR survey, based on proposed improvements and previous construction. Each area will extend across the entire roadway and be 25 feet long
- Hire a GPR contractor to survey the four areas
- Call in UNCC locates prior to the GPR survey. Mark the location of suspected trolley tracks with white paint on the pavement. Document the findings on a sketch.
- Work with the City to select one primary and one secondary location for further investigation. It is anticipated that two sets of parallel tracks are running down Brighton Boulevard at a depth of two feet
- Hire a hydrovac contractor to excavate two slot trenches (one at each set of tracks) to expose the tracks and determine the depth of the ballast. When the tracks are exposed, have the GPR contractor connect to the tracks and track the signal in either direction from the excavation. Backfill the trench and cover with permanent patch
- If the excavation at the primary area was unsuccessful, repeat at the secondary location

Utility Plans, Coordination, and Supplemental Potholing

- Perform an existing utility/ final design conflict analysis
- Coordination with utility owners
- Prepare utility specifications

- Prepare utility plans
- Develop supplemental pothole plan and hire potholing contractor to pothole twenty (20) locations over four (4) days
- Compile pothole data and update utility CAD file with pothole results.

Deliverables:

- Final Utility Specifications
- Final Utility Plans

Task 12: Survey/ROW

For Brighton Boulevard from the 28th Street transition zone to 44th Street, the following survey and ROW work will be completed.

Range Point Perpetuation

The Consultant will locate all land monuments such as Primary Control monuments from which the Right-of-Way or any land boundary will be calculated, described or monumented. This includes performing a diligent search within limits of the roadway for all existing range points that, if found, shall require preservation during construction. By City and County of Denver requirements, after a comprehensive review of all available records is completed, the diligent search should include a 2-foot by 2-foot by 3-foot deep excavation at the site of the range line intersection. The search must continue until the monuments are located or until there is an explanation for their absence. Located monuments will be reported based on the City and County of Denver datum. For range points that are not successfully recovered, the Consultant will utilize the best available records and field evidence including but not limited to plats, official surveys and resurveys, tie books, monument records, and land survey plats in order to calculate a coordinate position based on the appropriate City and County of Denver datum.

Final ROW Plans

Based on the final design, the Consultant will prepare right-of-way plans for a total of one-hundred-ten (110) property impacts (i.e. acquisitions, PEs, TEs) within the project limits. The final right-of-way plan and legal description format will be acceptable to the office of the City Surveyor and the City and County of Denver Right of Way Services Section. It is our understanding that title commitments for the impacted parcels will be provided by The City and County of Denver. Final ROW plans and legal descriptions will be deposited at the City & County of Denver Clerk and Records Office. Four sets of 11" x 17" color copies of final ROW plans and a PDF file of the complete ROW Plans will be delivered to the client.

The monumentation of existing or proposed right-of-way is not part of this scope of work.

Supplemental Survey

The consultant will provide up to eighty (80) hours of supplemental field survey and forty (40) hours of associated office time, as needed, in support of the development of final design.

Deliverables:

- Final Right-of-Way Plans
- Supplemental Survey- if needed

Task 13: Business Improvement District (BID) Support

BID support efforts are included in this scope of work. Support tasks associated with the formation of the BID and GID include:

- Support of petition requirements

- Support of election requirements
- Development of BID and GID Operations and Maintenance Costs
- Development of BID and GID graphics

Task 14: Integrated Contractor (IC) Coordination

For the construction of Brighton Boulevard from the 28th Street transition zone to 44th Street, the City plans to, under a separate contract, engage the services of an Integrated Contractor (IC). The Consultant will coordinate with the IC on the following items:

- Final Construction Cost Estimate
- Final Construction Plans

It is assumed that the Consultant will meet with IC Team three (3) times.

Deliverables:

- Attendance at three (3) meetings with the IC Team

Task 15: Additional Services

At the request of the City PM and with written confirmation, the Consultant will provide additional services to support the final design. Before any additional services are provided, the additional services scope and required level of effort will be agreed upon by the City PM and the Consultant PM.

Construction Administration

If the City, in its sole discretion, decides to proceed with Construction Administration Services, the Consultant and the City will develop a Scope of Work that will be incorporated into this agreement. Any Construction Administration work performed by the Consultant before the City executes a written amendment will be performed at the Consultant's risk.

Summary

Task #	Task	Cost
1	Project Management	\$100,520
2	Meetings	\$128,705
3	Civil Engineering Design	\$315,465
4	Drainage and Water Quality Design	\$148,280
5	Signing, Striping, and Traffic Signal Design	\$48,750
6	Traffic Control Design	\$48,240
7	Cost Estimating	\$9,040
8	Urban/Hardscape Design	\$135,200
9	Landscaping, Irrigation, and Lighting Design	\$196,570
10	Public Outreach and Public Meetings	\$80,505
11	Utilities	\$43,870
12	Survey/ROW	\$56,960
13	Business Improvement District (BID) Support	\$45,600
14	Integrated Contractor (IC) Coordination	\$62,700
15	Additional Services	\$100,000
Sub-Total		\$1,520,405
Reimbursable Expenses		\$15,000
Total		\$1,535,405

See attached spreadsheet for specific task breakdown.

Milestone Activity Schedule	
Milestone	Completion Date
Notice to Proceed	July 2014
Public Meeting #1	TBD
Final Engineering Plans and Cost Estimate	December 2015
Final Engineering Plans Review Meeting	December 2015
Construction Bid Plans	January 2016

**EXHIBIT A
BRIGHTON BOULEVARD
Phase II- Final Design and Construction Administration
SCOPE OF WORK
April 9, 2015**

Brighton Final Design	
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Tabulation of Earthwork	1
Tabulation of Surfacing	1
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Land Survey Control Diagram	5
Geometric Layout	4
Removal Plans	15
Construction Phasing Quantities	1
Construction Phasing Notes	3
Construction Phasing Standard Details	7
Construction Phasing Sheets	30
Roadway Plans	15
Roadway Profiles	15
Roadway Details	9
Bicycle Facility Details	12
Concrete Jointing Plans	15
Structural Seating Bench/Wall Details	5
Drainage Tabulation of Quantities	1
Drainage Plans	15
Structural Inlet Details	2
Storm Water Management Quantities	1
Storm Water Management Plan Notes	1
Storm Water Management Standard Details	6
Storm Water Management Plans	30
Signing and Striping Tabulation of Quantities	1
Signing and Striping Plan	15
Bicycle Facility Detailed Signing and Striping	12
Signal Tabulation of Quantities	1
Signal Plans	15
Bike Facility Detailed Signal Plans	5
Utility General Notes & Boring Log	1
Utility Plans	15
Landscape Design Quantities	1
Landscape Design Plans	25
Landscape Design Details	4
Planting Quantities	1
Planting Plans	15
Planting Details	4
Irrigation Design Quantities	1
Irrigation Design Plans	15
Irrigation Design Details	4
Lighting Plans Tabulation of Quantities	1
Lighting Plans	15
Lighting Details	4
Cross Sections - Brighton Blvd	90
Cross Sections - Cross Street	18
Total sheet count	455

Task #	Task	Cost
1	Project Management	\$100,520
2	Meetings	\$128,705
3	Civil Engineering Design	\$315,465
4	Drainage and Water Quality Design	\$148,280
5	Signing, Striping, and Traffic Signal Design	\$48,750
6	Traffic Control Design	\$48,240
7	Cost Estimating	\$9,040
8	Urban/Hardscape Design	\$135,200
9	Landscaping, Irrigation, and Lighting Design	\$196,570
10	Public Outreach and Public Meetings	\$80,505
11	Utilities	\$43,870
12	Survey/ROW	\$56,960
13	Business Improvement District (BID) Support	\$45,600
14	Integrated Contractor (IC) Coordination	\$62,700
15	Additional Services	\$100,000
Sub-Total		\$1,520,405
Reimbursable Expenses		\$15,000
Total		\$1,535,405